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THE COMPARATIVE YIELD ON TRADE AND PUBLIC SERVICE INVESTMENT

What constitutes a fair return upon capital invested in a business enterprise? Recent efforts of the Interstate Commerce Commission and of the various state public service commissions to regulate rates (or more truly to regulate profits) have made this a vital question. Broadly, the answer is given that such rate of return must be allowed as will attract capital in sufficient volume to develop and maintain the particular industry. As a statement of a ruling principle this is doubtless correct, but it is not a practical answer for, What is the fair rate of return that will attract capital to the industry? It does, however, suggest the fundamental truth that the investor has a right of selection and is therefore the final regulator; and, though for those who have already invested the choice has been exercised, the effect of regulation on the potential future investor is a question of paramount importance to the public.

The saving to the public which might result from reducing the limit of return on capital already invested in public utilities by, say, one or two per cent, considered by itself, is doubtless a notable sum, but it is insignificant if considered, as it should be, in relation to the value of attracting and inspiring with confidence the enormous further capital which requires yet to be invested in the extension of the facilities now established and the development of new ones if this country is to attain its full development and prosperity. So not only justice but self interest dictates that the public should not restrict capital already invested to a rate of return too small to attract new capital.

Eventually, if rate regulation is applied consistently, experience will indicate with some measure of accuracy the rates that are adequate to attract capital to railroad and other public service securities. In the meantime, however, there is pretty sure to be much groping around with consequent damage to the public as well as to the investor. Evidence is not lacking that many investors are inclined, for the time being at least, to allow the

regulating bodies to work out their experiments upon the other fellow while they place their money either where it will be as nearly safe as may be, as in a savings bank or in high grade bonds, or invest it where it will yield a larger return than it is likely to yield if invested in enterprises subject to regulation.

Thus the question really turns upon the competition for money. And money has its law of attraction, operating as certainly as the law of gravitation. Every investor is seeking safety and return. One may attach greater value to safety while another desires, if possible, a larger return even though attended with a somewhat higher degree of risk, thus taking the speculative or gambling chances; and much skill is displayed in devising types of securities that will appeal to the different classes of investors.

In the present uncertainty as to the maximum rate of return an investor in a public service corporation should be allowed to receive (and in passing it is important to note that it is nowhere proposed to guarantee even a minimum return), it would seem logical to inquire what return can be secured from investments in enterprises not subject to public regulation. Many attempts have been made in this direction with at best but incomplete or indifferent success. It must be remembered that there is a tendency among regulating bodies to fix a rate of return to be allowed on the amount actually invested in the business and that, substantially speaking, the intangible values, such as good-will, patents, etc., so frequently met with in industrial enterprises, and the so-called franchise and going concern values in public utility companies are to be eliminated from the capital sum upon which a company subject to regulation may earn a return. The inclusion of these intangible values, which has been almost universal until quite recent years, by both utility and industrial companies under the general heading of property or other equivalent title in corporation balance sheets, renders it impracticable to determine the rate of return upon the investment even in the case of corporations publishing reasonably full reports. Undoubtedly, the present tendency in the case of new industrial companies is to set out as a separate balance sheet item the investment in good-will or other intangible assets, but the number of instances where this is done is as yet relatively small. It is therefore not possible to compile from the published reports of corporation statistics that would be upon a basis permitting accurate conclusions to be drawn therefrom. In so far as these statistics are accessible, whether found

in the form of corporation annual report or of prospectus issued in the flotation of securities, they show with remarkable uniformity, a rate of return in excess of the maximum yet allowed in any representative case by any commission in determining rates.

It is true even of our national banks, than which no line of business is perhaps rightfully regarded as more safe. The Comptroller of the Currency reports that the net earnings upon the capital and surplus of all the national banks averaged 8.64 per cent for the forty-five years ending June 30, 1914. In only two of the last seven years of this period have the earnings ranged below this general average, and then but slightly, while the average for the seven years is 8.98 per cent. It will be observed that this rate of earnings is upon the surplus as well as upon the capital and if it is objected that bank surpluses are frequently understated and that secret reserves commonly exist, it is sufficient to say in reply that in so far as this may be true, the profits must have been understated by an equal amount and therefore the rate of earnings stated by the Comptroller of the Currency should, if anything, be increased.

In an effort to supplement the meager data obtainable from published records, I have made a study of a number of audit reports prepared by my firm with a view to determining in each case, so far as could be done, the investment exclusive of intangible assets of the character above mentioned, the return, and the resulting rate. The reports were selected purely at random from our files excluding only those upon enterprises subject to regulation or otherwise outside the field of inquiry, such as reports upon governmental bodies, charitable institutions and the like. It was necessary to discard a considerable proportion of the reports selected for examination principally because of their failure to disclose the measure of the intangible values included among the assets. This process of elimination, however, left 158 reports showing the amount of the investment and the profits, after payment of operating and management expenses, earned by enterprises engaged in a wide range of business activities and scattered throughout the United States. The contents of individual reports and the identity of the clients must, of course, be withheld, but certain group generalizations can be made without violation of professional confidence; and I trust they will throw some light upon the return earned by capital invested in lines of business open to competition but not subject to governmental regulation of rates or earnings.

It may be objected that an accountant's reports are likely to be confined to the more prosperous concerns and will not for this reason give a fair indication of general conditions. The premise here is correct only in part. Every important accounting firm is brought into contact, sometimes in bankruptcies and receiverships, sometimes through disputes between owners, sometimes to determine the efficiency of a management or to locate the reason for a falling off of earnings, with enterprises that are unprofitable. Even were the charge wholly true it would be relatively unimportant, inasmuch as the regulation of rates is merely an effort to limit the maximum earnings and does not concern itself with the failure of a given utility to earn that maximum.

The aggregate investment represented by the 158 audit reports was \$406,829,358. This relatively small total for so large a group is attributable to the fact that reports upon the accounts of most of the very large concerns had to be set aside for reasons indicated above. The annual profits remaining for the enjoyment of this capital, after providing for all costs and expenses of operation and management including depreciation of plant and equipment, were \$55,613,659 or 13.67 per cent. The periods covered by these reports are not uniform, but in most instances the accounts are for the calendar years 1912 and 1913 or for fiscal years ending in 1913 or 1914, while in a few instances the period covered is a fiscal year ending in 1912. During this time business conditions have been generally unfavorable and some lines of trade have suffered considerable depression. It may therefore be assumed that the profits earned during the past two or three years have been not more than a fair average; furthermore, as the present study is confined to audited accounts, the results may be expected to be more accurate than statistics usually are.

A few of the concerns under review show an actual loss on their operations. Only four, however, fail to earn any part of their interest charges, and these have a total investment of only \$1,527,914 and show an operating loss of \$26,993. Nineteen more having an investment of \$60,358,131 earned less than 6 per cent and fourteen of these businesses earned less than 5 per cent. Of the entire group of enterprises therefore twenty-three, or 14½ per cent in number, earned less than the usual legal rate of interest after paying the costs of operation and management.

A further analysis of the 158 reports under examination shows that upon the invested capital:

19 - Less than 6%
18 6 to 8%

In 117 cases	8 per cent or more was earned
" 97	10 " " " " " "
" 86	12 " " " " " "
" 70	15 " " " " " "
" 44	20 " " " " " "
" 28	25 " " " " " "
" 17	30 " " " " " "
" 10	40 " " " " " "

There appears to be a widespread belief that large corporations have crowded the small business man if not to the wall at least to the point where he finds increasing difficulty in making an adequate profit. Many intelligent persons sincerely believe this to be true and are deeply disturbed thereby. It is interesting and perhaps not without significance to find from the reports now being considered that fifty-nine of them relate to enterprises each having an investment of \$1,000,000 or more and having an aggregate investment of \$379,511,380 upon which the earnings amounted to \$51,317,952 or 13.52 per cent. Only one of these concerns failed to earn any profits and its loss for the year was only a fraction over 1 per cent upon the investment of \$1,200,000, so that its bearing upon the general average is unimportant. Twenty-five reports relate to businesses having an investment of \$100,000 or less and may therefore be taken as indicating so far as they may go the situation of the so-called small business man. The total investment in these twenty-five cases was \$1,156,827, while the profits are found to be no less than \$324,114 or 28.02 per cent. Another compilation shows that the average return upon the investments of \$500,000 or less was 16.67 per cent. The smallest investment shown by any of the reports is that of a retail store employing a capital of \$9,250, upon which for the year 1913 it earned 34.27 per cent. The highest rate of return in the group is found in a little establishment having an investment of \$13,000, while the second in rank employed slightly less than \$51,000. Of the ten instances mentioned above as having earned over 40 per cent each, five had an investment of less than \$60,000 and all but two were below \$200,000.

In determining the profits of a small business, the question of management salaries is relatively more important than in a large one and the thought may arise that a sufficient allowance for this expense might perhaps reduce largely the profits shown for the smaller enterprises. To this suggestion, two replies may be made: first, that a careful effort was made to exclude reports upon ac-

counts which did not make reasonable provision for management salaries; and, second, that since 1909, when the corporation tax law was enacted, the tendency among the smaller corporations, where the officers are usually the principal stockholders, has been toward a liberal allowance for salaries and a consequent reduction of taxable profits. It is not necessary to imply, nor do I so imply, that by the use of this means there has been any extensive evasion of taxation; but the corporation tax law permitted a deduction to be made for management salaries and it has not been customary for corporations either to fail to claim the deduction or in fixing the amount to err on the low side.

In so far, therefore, as the statistics before us indicate, it is very clear that the day of the small business is not yet past. The initiative and enterprise of the man of moderate means still bring, as they deserve to bring, a reward far beyond anything that may reasonably be hoped for by the employers of great aggregations of capital. The figures given for the profits of small enterprises may seem surprising to many. If this is so it will be largely because public impressions are based upon profits divided rather than upon profits earned. In most growing businesses the difference is substantial, as it is seldom desirable or practicable to distribute the whole of the profits.

Incidentally, it may be pertinent to suggest that the ideal type of regulation should provide not only rates for the distribution of profits but for rates of service that while not unduly burdensome upon the payers should not be reduced except where they provide a substantial excess over:

- (a) a fair distribution of profits to the owners;
- (b) a substantial sum for betterment and surplus to be held subject to definite restrictions and to be deducted from the capital sum in any future calculation of return.

It should be borne in mind that the theory of governmental regulation is based largely upon the assumption that public service corporations, from their very nature, are or should be monopolies, or, at least, not subject to the same competition, quantitatively or qualitatively, as other enterprises; in other words, that regulation is, to a large extent, a substitute for competition as the prime factor in the attainment of reasonable rates. And yet, as indicated below, commissions have been exceedingly loath to grant to public service corporations a return comparable to that being earned by unregulated enterprises, even where the latter are exposed to intense and active competition.

Contrasted with the profits earned by businesses not subject to regulation, the maximum return thus far allowed by the various state commissions is, so far as I have been able to ascertain, only 8 per cent. That is the most the owners can hope for and in some cases a smaller maximum is fixed. Among the states in which decisions upon this question have been rendered by courts or commissions, reference may be made briefly as follows:

Maximum return allowed by state commissions (per cent).

	Telephone and Telegraph	Gas and Water	Street Railway
Illinois	8		
Kentucky	7		
Maryland	8		
California		8	
Iowa		8	
Washington			7
Missouri	6	7	
New Jersey	8	8	
New York	8	7½	
Nebraska	7		8

The United States Circuit Court held in the Northern Pacific case that 7 per cent per annum was a fair return while in the Arkansas rate case 6 per cent with a possible 1½ per cent additional in lean years was allowed. Both of these cases were decided in 1911.

In every comparison of the rates of return, recognition must, of course, be given to the difference in the conditions affecting business generally and those under which public utilities are operated with the consequent greater measure of confidence displayed by careful investors in favor of the securities of companies in the latter field. At the same time it must be admitted that this margin of confidence in securities of utilities as against industrials is diminishing and the marked disparity of even less than ten years ago no longer exists.

Having in view the earnings of capital in businesses outside the field of public regulation and the increasing stability of such enterprises it does not seem too much to say that nothing is definitely settled by the decisions thus far rendered in rate cases. The commissions and the courts have been feeling their way among issues too often befogged and possibly with eyes too constantly

fixed upon interest rates and dividends and without giving sufficient consideration to the speculative element of profit that has made possible the rapid development of electrical and other utilities in recent years. It is the desire of every one that this process of development shall continue unabated. It can not continue if capital finds greater attraction elsewhere. Not the only attraction but certainly one of the most important is the rate of profit capital may reasonably expect to earn under competent, enterprising management.

It is my hope that the facts herein given, culled as they have been from a group of business enterprises at once too small to justify the drawing of final conclusions and yet a group much more extensive in variety of activity and in territory than, perhaps, has heretofore been subjected to a similar study in equal accuracy of detail, may prove suggestive; and, what is much more important, I trust what has been said may serve to incite a more comprehensive investigation of those business facts ordinarily stated in terms of profit and loss.

J. E. STERRETT.

THE STANDARD OF LIVING—UP OR DOWN?

In a democracy scarcely any public question is of greater importance than the standard of living of the common people. It is essential to know what is the actual level of this standard of living, and whether it is improving or deteriorating, not only because these facts are significant in themselves, but because they furnish the key to the solution of a number of other great problems. In the United States, diametrically opposite views are repeatedly expressed, with great conviction, as to the course of the standard of living, and each of these views finds ready acceptance with various audiences, according to their prejudices or preconceived notions.

It is probable that a much wider adherence is given to the opinion that the standard is improving than to the opposite view, partly because this is the comfortable and optimistic view, partly because the teaching of orthodox economics supports it, and most of all, perhaps, because of the failure to distinguish between two sorts of standards of living which exist in societies. These types of standards are the standard of a society as a whole, and the standard of a group within a society. It is perfectly possible, as history has repeatedly demonstrated, for the standard of a society as a whole to be improving, while that of one or more groups within the society is declining. Moreover, if the distribution of economic power within a society is very unequal, it may happen that the group, the standard of which is declining, may constitute a very large proportion, even a majority, of the total population. Here in the United States we are so familiar with the facts and figures depicting the enormous increase in prosperity of the nation and the rapid augmentation of wealth and income, that it is hard to realize that any considerable group of our people fails to share at all in this good fortune, and we easily jump to the conclusion that while the rate of gain of the poorer classes may not be so rapid as that of the wealthier classes, yet it is positive, so that every one has grounds for complacency, and none grounds for complaint.

It is significant that no reliable proofs have been presented in support of either view. Occasionally the orthodox view is bolstered up by statistical comparisons of the course of the price level of commodities in general with the index of general wages, but these figures are inadequate and inconclusive.

For some time the writer has experienced a growing conviction that this question of the course of the wage-earner's standard of living is altogether too vital to be left to random guesses and rash assumptions. Particularly has he felt that the statistical supports

of the orthodox view are wholly fallacious, for three principal reasons. First, indexes of price levels are usually based on wholesale prices, instead of the retail prices that the wage-earner pays. Second, indexes of price levels are almost always based on the prices of articles most of which do not enter directly into the budget of the wage-earner's family. Third, an index of wage levels is likely to be almost meaningless, because of the extreme difficulty in arriving at anything like an average of wages.

Furthermore, the writer has felt convinced that, in point of fact, the increase in prices in recent years has affected different classes of commodities very differently, and that those commodities, the prices of which have risen least rapidly, or have fallen, are those which belong in the general category of luxuries, while those articles, the prices of which have risen at a rate greater than the average, are the common everyday necessities of life, which constitute the major part of the workingman's expenditures.¹

Uncertainty as to the course of the standard of living of the wage-earner's family has been due to the lack of a basis of measurement, of a "yardstick," which would represent, in actual commodities, the elements in the workingman's standard, and which could be applied, in connection with the prices of those commodities at different times and places, to test the relative height of the standard of living of different groups. The following pages represent an effort to work out such a yardstick—a *standard* standard of living—and to apply it with reference to the longest period of time in the United States for which accurate data are available.

There are two elements in every standard of living—*income* and *outgo*. As for income, in the case of the wage-earner's family it consists primarily in wages. There are some other subsidiary sources of income, particularly the payments of boarders and lodgers, but these do not bulk large in the total, and as they are likely to vary closely with wages, for practical purposes the

¹ This view is supported by various statements made by Mr. J. A. Hobson, of England, such as the following: "Even if money wages had risen equally with the general level of prices, this excessive rise of food prices would have involved some loss to the wage-earners" (*Gold, Prices, and Wages*, p. 118). "The inevitable tendency of modern industrial forces, attested plainly by statistics of occupations, to assign an ever-diminishing proportion of national employment to the great staple manufactures engaged in supplying common 'routine' wants, and an ever-increasing proportion to subsidiary and luxury trades" (*The Problem of the Unemployed*, p. 23). See also article by the writer, "A Sociological View of the High Cost of Living," in the *Forum* for July, 1914.

fluctuations in the wages of any class of workers represent sufficiently well the fluctuations in the income of the families in that class.

The problem of outgo is not so simply stated. The items included are numerous and varied, and not the same for any two families, or for the same family in any two years. Yet the yardstick demands that there shall be a definite list of commodities which enter into the budget of the average family, and constitute the major portion of its outgo. The first step in the problem is to make out such a list of commodities.

This list will be divided into two main divisions, necessities, and comforts and luxuries, or "culture wants" as they are frequently called, though the term is somewhat grandiose in comparison with the items which it includes in the workingman's budget. The items included in the first category—food, clothing, shelter, heat and light—are fairly uniform for all families in a given working class, and are reasonably easy of enumeration. Those which come under culture wants are extremely varied and difficult to enumerate. Fortunately, it is not necessary to enumerate them for the purpose in hand. The things included in culture wants are really the things that make life worth living,² and the best possible index of the relative worth of different standards of living is the proportion of the total income which is available for culture wants, after the necessities have been supplied. It is not essential to inquire how this proportion is spent.

The task in hand, then, is to make out a budget of necessities which will come as near as possible to representing the actual expenditures of the ordinary workingman's family. This is the standard budget. The next step is to determine the cost of this standard budget at the two different times, under comparison; then to deduct this cost from the total income of the average family at each date. Finally, a comparison of the proportions of total income which remain to be expended for culture wants in the two cases, respectively, will indicate the relative height of the standards of the two periods. Since this is an undertaking in which method is everything, so that any fault in method will vitiate the entire analysis, the reader's indulgence is begged for frequent explanations of the exact process followed by the writer.

In the first place, to secure the list of necessities and the prices paid for them, it seemed best not to rely upon any theoretical es-

² Robert C. Chapin, *The Standard of Living among Workingmen's Families in New York City*, p. 198.

timates of what such families might or should do in the way of buying supplies, but to take the budgets of actual families as they themselves have reported them, and to use the items there included. Fortunately, within the past decade and a half, a number of reliable studies have been made. Those particularly used by the writer were Chapin, *The Standard of Living among Workingmen's Families in New York City* (1909); More, *Wage-Earners' Budgets* (1907); Kennigott, *The Record of a City* (1912); and Nearing's summary, *Financing the Wage-Earner's Family* (1913). These volumes contain a large number of carefully taken and thoroughly reliable budgets, picturing the exact living conditions of working families. The data were collected in or around the year 1908, and, in estimating prices, the effort was made to reduce everything as nearly as possible to the conditions prevailing in 1908.³

The budgets especially studied were those which came nearest to representing the average or "standard" family, a group composed of father, mother, and three children under fourteen, and living upon an income of about \$600 per year. The sum of \$600 a year was chosen, as it is the commonly accepted dividing line between unskilled and semi-skilled labor; and, while the ordinary unskilled laborer does not earn enough by his own efforts to provide his family with \$600 a year, this is a common income for families of this class; and within the class the yearly income would fluctuate in harmony with the wages of unskilled labor. The yearly earnings of an unskilled laborer will thus serve as a satisfactory index of the fluctuations of family income.

* It may occur to the reader that the year 1908, being one of industrial depression, is not a fair one to choose for purposes of comparison with 1890. The living conditions of the working classes in that year might be expected to be below the average of a continuous period of several years. The fact is, however, that neither the wage figures nor the price figures, for 1908, used in this study, show any appreciable variation from the general trend of wages and prices for the past fifteen years. As far as every important computation in this study is concerned, the year 1908 might have been an average year. The reason for this is that the primary cause of the suffering among wage-earners in 1908 was neither high prices nor low wages, but unemployment. This study takes no account of unemployment, for the reason that comparative data on unemployment do not exist. In so far as unemployment has become a more marked industrial evil in the past few years, the result would be to make the condition of the workingman in recent years even worse than the figures in this study show. In point of fact, the writer has made a tentative comparison of conditions in 1908 and 1913, with the result, so far as the evidence goes, that conditions seem to have been no better, if not actually worse, in 1913 than in 1908.

A careful comparison of the budgets given in the works referred to shows that an income of \$600 would be apportioned by the average family about as follows:

Item		Per cent	Cost
Necessaries	Food	48	\$288
	Shelter	20	120
	Clothing	12	72
	Heat and Light	6	36
		86	\$516
Culture wants		14	84
		100	\$600

The next step is to make a general estimate of the specific items included in each of the four divisions of necessities. This of course can not be done with complete accuracy, since no two families spend their money in exactly the same way. But study of the budgets reveals a rather surprising uniformity in some particulars, and it is possible to make out a statement which will stand as a fair average.

This is particularly true in the case of food, where certain articles, appearing with much uniformity, make up the major part of the diet. The following, then, is the "standard" weekly budget of a "standard" family:

Commodity	Amount	Cost (1908)
Bread, wheat (5c loaves or stale 10c loaves)	20 loaves	\$1.00
Cereals, other as		
corn meal	2 pounds	.20
oatmeal	1 pound	.25
Beef, veal, mutton	6 pounds	.66
Pork, ham, bacon	6 "	.90
Poultry	1 pound	.15
Fish	2 pounds	.15
Butter	1 pound	.30
Cheese	1/2 "	.10
Milk	1/2 quarts	.49
Eggs	12 "	.25
Potatoes	2 "	.20
Vegetables, fresh .....		.30
Peas and beans, dried	1 pound	.10
Sugar	3 pounds	.20
Fruit .....		.20
Sundries (tea, coffee, pickles, etc.) .....		.35
Weekly total		\$5.55*
Yearly "		\$288.00

* It may be worth noting that in making out this schedule the writer set down amounts and cost in order, taking them directly from the budgets, with

Since few unskilled wage-earners are home owners, the item of shelter for families of this class reduces practically to a question of rent—and for the most part tenement rent, or something analogous to it. The items concerned are more briefly set down than in the case of food, but they are less concrete and definite. Some of the elements of shelter are taken for granted, and others are not susceptible of accurate measurement and practical averaging. Thus it is taken for granted that apartments will be weather proof, and sanitary according to prevailing standards. On the other hand, lighting, ventilation, and the size of rooms differ greatly in different apartments, but can not well be tabulated. About all that can be done in setting down a standard rent budget is to estimate the average number of rooms occupied by a standard family, and the average price paid for them. Even this can not be done with close accuracy, as there is the widest possible variation, even in a given locality, in the type of accommodations secured for a given rental. The play of economic forces utterly fails to bring any close adjustment between commodity and price in the matter of tenement rents. Housing investigations frequently reveal situations like that reported in one of the Chicago studies, where, in a certain district, sixteen different rentals, ranging from \$4 to \$13 were paid for four-room apartments.⁵ Quite generally, however, families of the type in question will be found living in four-room apartments, and the price they pay will average around \$10 per month. The standard shelter budget, then, for the year will be:

Shelter (1908)	4 rooms	Cost, \$120
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The clothing budget is even more difficult to prepare. It is impossible to see how any family can clothe itself on the amount allotted for that purpose. Practically all the budgets which give complete outfits for a standard family call for an expenditure far in excess of the amount available to the standard family. The best that can be done is to set down a list of essential and representative articles, and regard them as typical of the clothing budget. Fortunately, this is sufficiently accurate for the purpose

no idea as to how the total would add up. The fact that when all the chief items in the budget had been set down, the total cost added up to within 35 cents (which was accordingly allowed for sundries) of the weekly amount allowed for such a family, seemed to afford an incidental indication of the accuracy of the estimates.

⁵S. P. Breckinridge and Edith Abbott, "The West Side Revisited," *American Journal of Sociology*, July, 1911.

of comparing standards of living. For as long as the articles are representative, and exactly the same list of articles is used throughout the comparison, it is a matter of minor importance whether they are exactly and completely what a standard family would buy. When typical staple articles are used, it can reasonably be assumed that other articles would fluctuate at approximately the same rate as these, so that while a family might use more, or fewer, or different articles of clothing, a given list would vary in price as between two periods of time harmoniously with the representative list set down. And this is all that needs to be known for the purpose of the comparison in hand.

The following schedule gives a list of a single year's outfit for a man and a woman. It is ordinarily estimated that the clothing of three children under fourteen will cost almost exactly the same as that of the father and mother. In this case, allowing 80 per cent of the clothing bill of the parents for the needs of the children, and adding it to the expenditures for the parents, makes a total amount exactly equal to the amount allotted for the clothing of the standard family. If this procedure is followed in each case, the comparison will be accurate. The standard clothing budget follows:

Article		Cost (1908)
Man	1 suit	\$10.00
	1 hat	1.50
	3 shirts	1.50
	1 pair overalls .....	.75
	1 pair trousers	2.00
	1 pair shoes	2.50
	1½ suits underwear	1.50
	Socks	1.00
Woman	1 suit	7.00
	1 hat	1.50
	1 pair shoes	1.50
	2 calico dresses	1.00
	1 flannel or woolen dress	5.00
	2 waists	1.00
	2 suits underwear	1.50
	Stockings .....	.75
Total		\$40.00
Add 80 per cent for children		32.00
Total yearly clothing budget for family....		\$72.00

There remains the matter of fuel and light. Here are three chief items—coal, gas, and kerosene. Some allowance should

also be made for wood and matches, though many families pick up their supply of the former. Coal is the most important item, and is used for cooking and heating. Gas comes next, used for cooking and lighting. Kerosene is also quite largely used for these purposes. The expenditures of the standard family for these items would be approximately as follows:

Article	Amount	Cost (1908)
Coal	3 tons	\$21.00
Gas	10,000 cubic feet	9.00
Kerosene	26 gallons	3.38
Wood and matches		2.62
Total		\$36.00

The foregoing paragraphs furnish a standard budget of the necessities of life, as used by a workingman's family, dated 1908. In that year a family with an income of \$600 could have bought the commodities listed, at the prices current in the stores they would naturally patronize, and have 14 per cent of their income, or \$84, left for culture wants.

The next step is to see what exactly these same commodities would have cost under like conditions in 1890. The year 1890 is chosen for the following reasons. The accuracy of the comparison in hand demands that, as far as possible, the figures used be taken from continuous series, based on data gathered by the same agency and under conditions as nearly identical as possible. All incidental variations due to locality, quality of goods, type of selling agency, etc., will thus be eliminated, leaving only the fluctuations due to actual changes in price. The United States Bureau of Labor Statistics furnishes a number of index figures, covering many of the important items concerned, and these run back to 1890, but no farther. The year 1890 is also a good representative year for conditions at the end of the last century. The disturbance of prices due to the Civil War was over, and the recent great rise in prices had not begun. It was a prosperous, ordinary, normal year.

The method employed in comparing prices as between 1908 and 1890 is as follows: Wherever an official index number for a given commodity exists, that will be used. The cost in 1908 is divided by the index for 1908, giving the cost at the basic figure 100. This is then multiplied by the index for 1890, which gives the cost in 1890. Where an index for the exact commodity is not available, an

index for a closely related or representative commodity is used. Thus, there being no index for bread, the index for flour is used, it being assumed that the price of bread will vary closely with the price of flour. Where no index is available, and where no quotations of actual prices can be found for 1890, the cost of the item in question is assumed to amount to the same proportion of the total cost of the given budget in 1890 as it was in 1908. Thus, the cost of fresh vegetables in 1908 having been set down as 1/18 of the total food budget, 1/18 of the food budget of 1890 is allowed for the same commodity. The items with reference to which this procedure is followed are few and are of minor importance, and the lack of accuracy involved could not materially affect the general result. The indexes used are taken from United States Bureau of Labor Bulletin, No. 110, pages 18 and 19.

Commodity	U. S. index used	Cost 1908	Index 1908	Index 1890	Cost 1890
Bread, wheat	Flour, wheat	\$ 1.00	127.1	110.2	\$0.87
Cereals, other	Corn meal	.20	142.6	101.3	.14
Beef, veal, mutton	Round steak	.66	135.5	97.6	.47
Pork, ham, bacon	Pork chops	.90	144.6	96.5	.60
Poultry	Hens	.15	134.9	102.8	.11
Fish		.15			.12e
Butter	Butter, creamery	.30	127.9	99.2	.23
Cheese		.10			.08e
Milk	Milk, fresh	.49	123.2	100.4	.40
Eggs	Eggs, strictly fresh	.25	142.8	100.3	.18
Potatoes	Potatoes, Irish	.20	129.8	109.0	.17
Vegetables, fresh		.30			.24e
Peas and beans, dried		.10			.08e
Sugar	Sugar, granulated	.20	101.3	120.8	.24
Fruit		.20			.16e
Sundries		.35			.27e
Total weekly budget		\$ 5.55			\$4.26
Total yearly "		\$288.00			\$226.72

e. Estimated.

Next in order is the item of rent—the most difficult of all for statistical comparisons. The factors which enter into that human necessary called an "apartment" are so numerous, and many of them so intangible, that it is practically impossible to set up a fixed standard in this particular. Furthermore, as has been observed over and over again by students of housing conditions, there is no approach to uniformity in the rentals of the same sort of apartments in the same locality at the same time. Anything in the nature of an index figure is hardly to be thought of. Cer-

tainly it does not exist. More than this, authorities seem to agree that there are not in existence data which will furnish anything approaching an exact mathematical comparison of rentals in the United States at about the years 1890 and 1908. Yet, with reference to so important a point as this, it is requisite that some trustworthy indication of the situation in general be secured, or this whole study will be inconclusive.

There are two chief sources of information on this subject. One consists in the scattered references to rentals which appear in discussions of housing conditions written about 1890. The other is the general opinion of students who have gone into the question thoroughly, and whose observation and experience gives authority to what they say.

As to the former of these lines of evidence, the showing is meager. In *Scribner's Magazine* for 1892 there appeared a series of articles dealing with "The Poor in Great Cities." Here and there throughout these pages are citations of rentals, dealing mainly with New York City, but with one reference to Chicago. In the *Publications of the American Economic Association* for 1893 is to be found a prize essay by Marcus T. Reynolds, dealing with the question in hand, in which a large number of rentals are quoted, these too being practically limited to New York, Brooklyn, and Chicago.* While a comparison of these figures with those afforded by recent studies in the same cities seems to indicate a considerably lower general level of rates at the earlier date, yet the showing is so inconclusive from the mathematical point of view as not to justify taking space in the present study for the presentation of parallel sets of figures. In a report of the Massachusetts Bureau of Statistics of Labor, published in 1882, entitled *Fall River, Lowell, and Lawrence*, a number of typical rentals for these three cities are quoted. If these are compared with the figures recorded in Kenn-gott's *Record of a City*, it appears that on the whole as good accommodations could be secured in Lowell for about \$6 in 1882 as for \$8 or \$9 in 1908. Here, again, a positive conclusion is not warranted.

The most reliable basis of judgment is the testimony of experts. Mr. Lawrence Veiller, probably the highest authority in the country on housing in general, in a personal letter to the writer, says.

* Marcus T. Reynolds, "The Housing of the Poor in American Cities," *Publications of the American Economic Association*, vol. VIII (March and May, 1893).

"The impression which I have gained through my more or less close observation during the past twenty years is, that although there has been a very considerable increase in the cost of living throughout the United States, the largest factor in that cost of living—rent—has not materially increased." Against this opinion are to be set the statements of a number of authorities. Thus Mr. Streightoff says: "In 1900, a two-room tenement in New York City could be hired for from \$8 to \$10 a month, three rooms at \$8 to \$15, four rooms at \$13 to \$17, and five rooms for about \$23. Since that time rentals have risen."⁷ Mrs. More says that rents "have increased in the last two years, during which these statistics were taken (1903-1905), from 10 to 20 per cent. The most prominent real-estate agent in the neighborhood puts the rate of increase at about 15 per cent as a conservative estimate."⁸ Professor Chapin says: "The burden of high rentals was increased (from 1905) up to the middle of the year 1907 by the general tendency of rents to rise. . . . The amount of increase varied from 50 cents to \$5 a month, but in the majority of cases was \$1.00, \$1.50, or \$2.00."⁹ These three quotations, taken together, bear witness to a steady rise of rentals in New York City from 1900 to 1907. Mr. Everett P. Wheeler is responsible for the statement that "In 1860, a workingman could get as comfortable rooms in New York City for \$8 a month as he now (1913) can for \$16. The reason for this is mainly that the cost of building has greatly increased."¹⁰ It is not likely that all, or nearly all, of this rise was accomplished before 1890. The Massachusetts Commission on the Cost of Living (1910) found that "Rents throughout Massachusetts have increased very materially during the past fifteen years. This upward movement has not, however, kept pace with the increase of the general cost of living."¹¹ Referring to conditions in Lowell, Mr. Kenngott says: "During the last few years the great industrial corporations . . . have discarded the old paternal system of caring for their employees. The result is that the rents in houses formerly belonging to the corporations have been greatly in-

⁷ Streightoff, *The Standard of Living among the Industrial People of America*, p. 71.

⁸ Louise B. More, *Wage-Earners' Budgets*, p. 32.

⁹ Robert C. Chapin, *The Standard of Living among Workingmen's Families in New York City*, pp. 83-4.

¹⁰ Wheeler, "The Increased Cost of Production," *Annals of the American Academy*, vol. 48, p. 244.

¹¹ *Report of the Massachusetts Commission on the Cost of Living*, p. 134.

creased."¹² Thus the bulk of authoritative opinion seems to lean strongly in favor of the view that there has been a decided increase in tenement rents in the past fifteen or twenty years.

Before attempting to form a final conclusion, one or two general facts should be considered. The first of these is the universal and well-known tendency of rents to rise in a growing society, independently of the rise of prices in general. There would certainly have to be some powerful forces at work in such a country as the United States to prevent the rents of dwellings from rising at a rate at least approximating that of the rise in the general price level. It is hard to conceive what these forces could have been in the past two decades. It appears that the operation of this tendency of rents to rise is often obscured by the fact that, *in a given tenement house*, rents often rise slowly, if at all, especially in the case of steady tenants. The foremost factor in fixing rents seems to be the cost of erection and upkeep. Rents once fixed may then be maintained at almost the same figure indefinitely. But if new tenements in 1890 were compared with new tenements of the same sort in 1908 (which is the only logical form of comparison), it would certainly seem that the great increase in the cost of materials and the cost of labor, as Mr. Wheeler observed, must have necessitated a decided increase in the rentals charged. It should also be noted that the rapid urbanization of the United States during the past two decades must inevitably have had the tendency to increase the cost of housing for the wage-earning classes in general.

Putting all these things together, the fact of a general rise in tenement rents between 1890 and 1908 seems to be well established. And it seems well within the margin of conservatism to say that accommodations which cost \$10 in 1908 could have been secured for not more than \$8 in 1890.

No official index figures exist for the retail prices of articles of clothing. However, United States Bureau of Labor Bulletin No. 99, Table III, gives indexes of wholesale prices of a number of articles of clothing, and these have been used in estimating the budget for 1890. A comparison of the official indexes of retail and wholesale prices of the same commodities, where such are available, shows that, while the wholesale prices fluctuate more violently from year to year, the rise in retail prices is greater, if anything, over a period of years than the rise in the wholesale prices. It is

¹² Kenncott, *Record of a City*, p. 28.

safe to assume that use of indexes of wholesale prices will tend to overstate, rather than understate, the prices in 1890.

Commodity	U. S. index used	Cost 1908	Index 1908	Index 1890	Cost 1890
Man Suit	Serge	\$10.00	132.	120.9 (1892)	\$8.79
Hat		1.50			1.50e
Shirts	Shirtings (average)	1.50	120.0	112.9	1.41
Overalls		.75			.75e
Trousers	Trouserings	2.00	127.6	106.6	1.67
Shoes	Men's vici calf	2.50	114.8	101.0	2.20
Underwear	Underwear (60 p.c. wool)	1.50	106.0	106.9	1.51
Socks	Socks (men's cotton)	1.00	88.9	133.3	1.49
Woman					
Suit	Serge	7.00	132.0	120.9 (1892)	6.41
Hat		1.50			1.50e
Shoes	Women's solid grain	1.50	118.5	104.0	1.31
Dresses, calico	Calico	1.00	104.3	117.5	1.13
Dress, wool	Cashmere, all wool	5.00	127.1	119.8	4.71
Waists		1.00			1.00e
Underwear	Underwear (60 p.c. wool)	1.50	106.0	106.9	1.51
Stockings	Hose, women's cotton	.75	84.2	131.6	1.17
Total yearly budget		\$40.00			\$38.06
Add 80 per cent for children		32.00			30.45
Total yearly budget for family		\$72.00			\$68.51

e. Estimated

In determining the fuel and light budget it is necessary to use again the indexes of wholesale prices furnished in Bulletin No. 99. Indexes are furnished for coal and kerosene. An index is also given for matches, declining from 111.5 in 1890 to 85.4 in 1908. No index is given for kindling wood, but it is reasonable to suppose that the price of this item would have risen enough to offset the fall in the price of matches. Lacking accurate data, it seems best to leave the figure for wood and matches the same in 1890 as in 1908. The indexes for gas, given in the retail price series, do not go back as far as 1890. They indicate, however, that the price of gas has been falling. The figure of \$1 per thousand is selected rather arbitrarily as the price in 1890. It is probable that working families in the earlier year burned relatively less gas and more kerosene than in 1908, so that the lower price of kerosene would more than offset the higher price of gas. The heat and light budget follows:

Commodity	U. S. Index used	Cost 1908	Index 1908	Index 1890	Cost 1890
Coal	Anthracite coal, stove	\$21.00	127.1	97.8	\$16.14
Gas		9.00			10.00e
Kerosene	Petroleum, refined for export	3.38	133.9	112.9	2.86
Wood and matches		2.62			2.62e
Total fuel and light budget		\$36.00			\$31.62

e. Estimated

The standard family's complete budget for necessities in 1890 is:

Food	\$226.72
Shelter	96.00
Clothing	68.51
Fuel and light	31.62
	<hr/> \$422.85

There now remains the most critical part of the whole undertaking—the estimate of the family income in 1890 of the same grade of family as would receive \$600 in 1908. It was stated above that, since wages constitute the major portion of the income and since other elements of income would be likely to vary closely with wages, the wages of an unskilled worker would be taken as the index of family income. If the Bureau of Labor furnished an index of the wages of unskilled labor, and if such an index were reliable, the task would be simple enough. But no such index is furnished, probably for the reason, mentioned above, that it is practically impossible to make an average of wages which will have any real value. The Bureau of Labor Statistics does furnish, however, in its *Wages and Hours of Labor Series*, indexes of the hours per week, and wages per hour in a number of industries. Combining these two, it is possible to get an index of full-time weekly earnings. These indexes work out as follows in the following industries:

Industry (manufacturing)	Index 1908	Index 1890	Bulletin No.	Page
Cotton goods	142.9	102.1	128	8
Woolen and worsted goods	125.1	100.6	128	112
Silk goods	106.6	100.8	128	174
Lumber	114.7	102.3	129	8
Furniture	122.2	101.8	129	125
Boot and shoe	120.4	98.8	134	8
Hosiery and knit goods	129.4	106.8	134	73

An absolutely accurate average of these indexes should of course be weighted on the basis of the number of workers in each occupation. This it was found impossible to work out, because the occupation statistics of the census are not classified on exactly the same basis at different decades nor do they correspond with the above grouping. A simple average of the above indexes will, however, serve the purpose roughly, and will indicate the relative height of the wages of these classes of workers in 1908 and 1890. The average of the above indexes for 1908 is 123, and for 1890 101.9. On this basis an income of \$600 in 1908 would be represented by an income of approximately \$497 in 1890.

Other methods of forming an estimate of wages are as follows. Miss Edith Abbott, in her careful résumé of wage statistics, *The Wages of Unskilled Labor in the United States, 1850-1900*, Table X, cites \$1.47 per day as the average wage of general unskilled labor in 1890. No comparable single figure is known to the writer for the year 1908. But a study of wage statistics, and a familiarity with the wages actually earned by unskilled laborers in the last few years, show a wage of \$9 per week, or \$1.50 per day to be one of the commonest wages earned by workers of this class.¹³ Taking this as an average for 1908 and comparing it with Miss Abbott's figure, an income of \$600 in that year would be represented by an income of \$588 in 1890. The *Statistical Abstract of the United States* gives an index of full-time weekly earnings, of general laborers, not merely unskilled, which stands at 122.4 in 1907 and 101.0 in 1890.¹⁴ These figures have not been regarded as very reliable, and the series has been discontinued since 1907. Using these indexes for what they are worth, \$600 in 1907 becomes \$495 in 1890.

Probably the most valuable and significant set of figures for the present purpose is that furnished by the *Statistical Abstract* (1914, p. 666) giving the average number of wage-earners in the manufacturing industries of the United States, and the total wages paid in dollars from 1850 down to 1910. Obviously, dividing the total wages paid by the average number of wage-earners will give the average full-time yearly earnings of a laborer for the year in question. The figures given are for the calendar year preceding the

¹³ The New York State Factory Investigating Commission found 50,000 men in four trades alone in New York earning under \$8 per week in 1913-14. See *The Survey*, December 12, 1914, p. 279.

¹⁴ *Statistical Abstract of the United States*, 1910, p. 251.

census year, but inasmuch as this is true throughout the series, there can not be any great discrepancy in using the figures for 1890 as indicative of that year, and estimating those for 1908 on the same basis. In 1890 there were 4,251,535 wage-earners receiving \$1,891,209,696 or \$444.83 each on the average. For 1908, wages and number of wage-earners were estimated by taking three fifths of the increase of each item between the years 1905 and 1910, and adding it to the figures cited for 1905. This gives an estimated number of wage-earners of 6,156,382, receiving an estimated total of \$3,100,400,711 in wages, or \$503.61 each in 1908. Using the proportion \$503.61 to \$444.83 as a basis of calculation, \$600 in 1908 becomes approximately \$530 in 1890. This method seems to the writer to be by all odds the most accurate one known to him of estimating relative general wages in the years in question.¹⁵

The various methods suggested above indicate a family income for the standard family in 1890 varying from a few dollars less than \$500 to nearly \$600. The most valuable method indicates \$530. In order to be absolutely on the safe side, with regard to overdrawing conditions in 1890, \$500 may be taken as the income for that year.

In order to arrive at the final comparison of the standards of 1890 and 1908, it is merely necessary to subtract from the total income of \$500 the sum of \$422.85, which covers the expenditure for necessities of the standard family in 1890. There remains a balance of \$77.15, or 15.4 per cent of the total income in 1890, as against 14 per cent in 1908, to be spent for culture wants.

It is evident, then, that on the basis of the test adopted at the outset, *viz.*, the relative proportion of total income left for culture wants, the working families of 1890 enjoyed a higher standard of living than those of 1908. It might perhaps seem, at first thought, in the light of what was said about the relatively smaller increase in the price of luxuries than of necessities, that the family in 1908 with its 14 per cent could purchase more in satisfaction of culture wants than the family in 1890 with its 15.4 per

¹⁵ It should be noted that most of the figures cited, being based on general wages instead of unskilled wages alone, have a tendency to overstate the rise in income of such families as we have in mind, because of the fact that the progress of unionization in the past twenty-five years has given a stimulus to skilled and semi-skilled wages, by which unskilled labor has benefited little, if at all. But it is impossible, in the case of most wage statistics, to separate unskilled wages from the rest, and they must stand as they are.

cent. If the culture wants of the unskilled laborer's family included real luxuries, there might be an element of truth in this supposition. But, as has been intimated above, they do not. The items of expense which are included under culture wants in the \$600 family include outgo for doctors, medicine, dentistry, religion, education, saving, recreation, insurance, etc., items which are regarded as utter necessities by more well-to-do families, and with reference to which there is no reason to suppose that the cost has not increased at least as fast as the average of prices.

The writer is well aware that the foregoing data do not prove that the common laborer's family was better off in 1890 than in 1908. Nothing statistical is *proved* if there is a single estimate, a single approximation, a single gap in the demonstration, a single chance for error. But he does believe that they furnish very strong evidence in support of the proposition. Every effort has been made, in cases of uncertainty, to throw the balance against conditions in 1890 rather than in favor of them. Every estimate has been intended to overstate prices and understate wages in 1890, rather than the reverse. The conclusions have been checked up by the writer, when possible, by other methods, and particularly by making a similar comparison of conditions in 1882, using in this case, not index figures, which do not exist, but actual price and wage quotations, and contemporary descriptions of living conditions in that year. The sources utilized especially were two publications of the Massachusetts Bureau of Statistics of Labor, viz., Carroll D. Wright, *Comparative Wages, Prices, and Cost of Living*; and Fall River, Lowell, and Lawrence. Comparison was also made with the Seventh Annual Report of the Bureau, dated 1876, which gives some very remarkable and complete data as to living conditions in 1875. The results of this study also indicate that conditions in the eighties were considerably better than in 1908.

It is probable that more exhaustive study of prices actually current in 1890 might necessitate some minor modifications in various items of the budget. It does not seem possible that it would materially affect the general conclusions. One thing seems safe to say—that the foregoing data *disprove* the right of anybody to assert with serene confidence that the standard of living of the American common laborer has improved in the past thirty years. The burden of proof is laid on the optimists, to bring forward some positive verification of their assumptions.

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THE TARIFF AND THE ULTIMATE CONSUMER¹

The middleman is on the defensive in these days of "efficiency," and justification is demanded of him for the exercise of functions which once were accepted as natural and necessary. To suggest, however, that he should be compelled to bear the cost of protecting the producer whose goods he sells, seems to demand more than may justly be expected, even of the now long-suffering middleman. That this can be done, and that therein may be found a theoretically sound basis for protection, is the suggestion advanced by Professor Henry C. Emery in the September number of this journal under the title which heads this article.

Because of the many complexities of the market, particularly the existence of set prices for many commodities, protective duties may be so adjusted, he suggests, as to "secure to the producer a somewhat higher price than he would be able to get without the tariff . . . without laying any additional burden upon the consumer." If sufficient data are obtained as to actual market conditions for each protected commodity, a point can be found at which to adjust the duty so that the increase in the producer's price will be great enough to be really protective, and at the same time slight enough so that the increase in the price paid by the retailer, assuming the manufacturer's increase is not absorbed before it reaches him, will be so insignificant that he will not raise the price paid by the consumer; or, in the case of set price goods, will not transfer the protected commodity to the class of goods having the next higher set price.

In elaborating his suggestion, Professor Emery follows three lines of reasoning. (1) He points out that actual market conditions are so complex that the economist's theories do not apply as he supposes, and that the theory of value—the groundwork upon which the generally accepted theories of the incidence of taxation are based—needs reconstruction and may even be altogether worthless, because it does not meet the facts as they actually are. He is therefore not convinced on theoretical grounds that the consumer bears the tax in the case of a protective duty, and prefers to reopen the question on "practical" grounds. (2) Despite the (to him) apparent invalidity of the theory of value, he admits, nevertheless,

¹ A reply (with some remarks on the theory of value) to "The Tariff and the Ultimate Consumer," by Henry C. Emery, in *THE AMERICAN ECONOMIC REVIEW*, vol. V, no. 3 (Sept., 1915).

that, *in the long run*, the accepted theory of the incidence of protective duties is valid, that the consumer will pay a higher price if the producer receives a higher price. He chooses, however, to dismiss the "long-run" result on the ground that it is beside the point. He is concerned, in the article under discussion, only with "the intensely practical question of the probable effect of actual tariff changes in this country," and does not consider that long-run results need play any part in questions of tariff practice. He confines himself, therefore, to those most obvious effects which follow shortly after a change in duty. (3) He points to specific changes of duty which, he believes, would have been absorbed in the distributive process, and maintains that it can usually be ascertained by actual investigation whether or not a given change in rate will be carried on to the consumer.

Professor Emery is confident that his suggestion is practicable, and goes so far as to assert his belief "that if any sound economic argument for the permanent maintenance of a certain scale of protective duties can be made, the germ of it will be found . . . in this consideration of the relation of producer to consumer."

In endeavoring to show the questionableness of this suggestion, both as a practical problem in protection and as a groundwork for a sound protective theory, I wish to acknowledge the worth of such criticisms of our accepted theory of value as that made by Professor Emery in his paper. Our science is moving toward things "practical." As a completely deductive science, it failed to win its way among those who most need a working knowledge of its principles, and the present trend toward the practical, in the way of closer study of the more intimate facts of business organization and business practice, seems likely to give it better standing and greater usefulness in the world of business and of politics. Our theory has seemed remote from the real facts of life. We have maintained that, given certain conditions, the price of a commodity would move in a specified direction, *provided* that competition were unrestricted, or that complete monopoly existed; and the tendency has been to dismiss the fact that competition usually is restricted in one way or another, and that many monopolies are not complete. The trained economist, to be sure, has realized the hypothetical nature of his premises and conclusions, and has come to understand not merely that his conclusions must be modified, but in general how they must be modified in the many cases in which competition is restricted and monopoly incomplete. The average student of

economics, however, together with laymen in general, has not understood the matter, and has more often than not carried away the impression that the economist either does not know what he is talking about, or is talking about conditions which do not exist. Studies in the factual basis of economics are therefore more than justified. But factual studies can never replace the deductive science. They can only add to its reputation and applicability by a double process of limitation and extension, limiting the applicability of purely hypothetical conclusions, extending the applicability of modified forms of these conclusions. This is perhaps what Professor Emery had in mind when he suggested "disregarding the old theory [of value] till we have made a new inductive study of price phenomena as they appear in the actual markets of the day."

Are we likely to acquire from factual studies in the market-place the basis for a new theory of value, as Professor Emery seems to think? There appears to be an increasing tendency, illustrated by Professor Emery's article, to shelve the old theory and hunt in the maze of facts for a new one. I find it impossible to believe, however, that the fundamental basis of the theory of value can be even materially modified in this manner. We may throw light upon the validity of our present theory in particular cases, but a new theory can not be found in the market-place. Is not value largely a matter of psychology and, perhaps, of biology? Surely for the marginal utility theorist it is. He takes ready-made the psychological facts of desire, and translates them into utility. He takes the psychological (and physiological) facts of response to stimuli, and translates them into a law of diminishing utility. Whether the marginal utility theory is correct or not, human wants are the underlying foundation upon which any theory of value must be built. No purely objective theory has ever sufficed to explain the facts of value. Even the adherents of the cost-of-production theory, the nearest approach to an objective theory that has ever obtained any standing, have taken refuge in psychological interpretation of it. Yet we can obtain only an objective theory from pure induction in the market-place. The facts of the market are meaningless to us, except in the light of human wants. Human wants acquire significance in the light of modern psychology and its basis, biology.

In so far as the theory of value is not founded upon psychology, it is based upon the chemistry of agriculture and the commonest principles of physics. These the economist synthesises into a law

of diminishing returns, and upon it builds the non-psychological part of the theory of value. We may throw considerable light upon this phase of value by going behind the market and studying the technological organization of industry and the ratios between land, labor, and capital actually existing in established industries. The relation of these factors to one another in jobbing and retailing would be well worth bringing to light, as well as their interrelation in other industries. But when we have learned the facts, we shall be no nearer a perfect and permanent theory of value than we are now. We shall only have discovered the limits of the field within which our present theory applies. We know already the effect of diminishing returns on cost, and so on price, though, for the most part, we did not discover it from inductive studies in market price. We shall hope to gain light from studies in the marketing of goods, upon the extent to which the law of diminishing returns is applicable, and to learn how numerous are the industries in which the combination of land, labor, and capital is such that, for a time, costs will decrease with increase in production, instead of increasing. We know already, though not from induction, how in general such a combination of factors affects price, and we are working our way toward a more comprehensive understanding of this dominant fact in large-scale production; but, again, not by induction. In this the inductive studies thus far attempted have been of little, if any, assistance, except for illustrations. Induction showed that in some industries costs did decrease with increase in production. It did not give us the explanation.

We may hope to learn more definitely from studies in marketing, the limitations of our premises and conclusions. We may hope also to gain light on the relative importance of non-economic factors in the determination of price. We may hope, further, to increase our knowledge of the elasticity of organization. How far is there such a thing as perfectly "free" competition? In what ways is competition not free? To what extent has monopoly displaced it? How much influence have such non-economic factors as habit, friendship, racial clannishness, patriotism? What forces bring it about that men do not attempt to secure absolutely the maximum gain from business and how widespread is such a condition? These are questions which we may hope to answer by the use of facts gleaned in such investigations as that of the Tariff Board and such as Professor Emery suggests in the article under discussion. But we shall not discover in them a new basis for a theory of value.

This is the disappointing aspect of the so-called historical school whose adherents have insisted upon the value to the economist of the facts of economic evolution. Practically nothing has been contributed by that school to economic theory. It is the prime disappointment of economic history in general, that it has failed to throw light, to any appreciable extent, upon economic theory, except in the way of illustration. Its value has been chiefly of a practical nature, the explanation and clearer understanding of the facts of economic organization. In this it abundantly justifies itself, but not for any contribution to economic theory. May not one assert still, despite the growing insistence upon inductive study, that in its fundamentals, economics, so far as the theory of value is concerned, is a deductive science and can not become inductive.²

Passing to more special topics in Professor Emery's article, let us take up first the complexities of the market to which Professor Emery refers, and which, he thinks, might make it possible to levy tariff duties so as to fall upon the middleman. We find that these consist of the set price system, and the ubiquitous existence of monopoly and quasi-monopoly in many, if not most, lines of trade, with the accompanying practice of charging what the traffic will bear. Professor Emery objects that the economist "has been in the custom of waiving aside as 'abnormal' or 'temporary'" the phenomena presented by these complexities. I have indicated above that this, which would be a body blow were the accusation true, fails to meet its mark because the economist does consider these phenomena and does recognize that, in the dynamic state in which economic life exists, they are not abnormal. That we have not found a wholly satisfactory explanation of the movements of individual prices when conditions are dynamic, rather than static, is due not so much to a want of facts as to inability to isolate facts as the natural scientist does. The physicist, wishing to trace the flight of a bullet from a gun, does not first of all experiment by firing the gun and searching for the bullet, and then guessing what effect air pressure, wind, and other factors had upon it. From data contributed by the mathematician, and by previous experiments of the simplest sort, he calculates its flight in a vacuum, then calculates one by one the effects of various factors upon it until, if his data and his calculations were exact enough, he could fire the gun and afterward pick up the bullet. This is deduction of the

²For the purposes of this paper, this assertion is limited to the theory of value. I do not maintain, and do not believe, that all branches of economics are deductive only.

purest sort. It is based, to be sure, on previous inductions, but so also are the deductions of the economist concerning value. The psychologist, the physicist, and the chemist have performed them for him. Let us not be misled by the infrequent existence of a major premise. "Free competition" is no less existent than the physicist's vacuum. Both physicist and economist must work with premises capable of formulation. It might be possible to deduce a theory of value from complete monopoly, which is probably more of a reality than its opposite. Some premise, capable of exact formulation, is necessary. Logical reasoning can be built upon no other basis. And one or the other of these extremes, free competition or complete monopoly, is the only starting point from which logical thinking concerning price can proceed, for only these two conditions fulfil the requirements of logic. Other conditions of the market represent degrees of these.

Indeed, Professor Emery is under the logical difficulty here of trying to prove too much. If our theories of price are invalid in the light of the facts, we are all anxious to have it proved, but to establish Professor Emery's proposition concerning tariff duties some other theory must be substituted. That there are uniformities of condition and action which may serve as premises for conclusions, no one seriously doubts. To suggest that there are not, is to imply that no reasoning whatever is possible on the matter. To suggest, as Professor Emery does, that there are uniformities, but that we do not know them, is to destroy just as effectively the value of the suggestion he makes. If we have no valid theory to guide us we do not know whether the consumer bears the burden of a tariff or not. The investigator's facts are meaningless. We do not know how the consumer may escape or the middleman bear the burden. A constructive suggestion which rests upon the destruction of known propositions without offering substitutes for them is abortive. If the theories of value and distribution now extant are valid, the existence of monopoly and quasi-monopoly make it more, not less, probable that the middleman will shift the burden to the consumer. If there is no valid theory, then we do not know who bears it under conditions at all complex, and it would be useless to attempt to adjust duties so that they should fall on any one or another group of persons.

Looking at the matter from the "practical" standpoint, the complexities of the market are admittedly great, so great that, without reference to its theoretical aspects, Professor Emery's suggestion

seems to be valueless, so far as the theory and practice of protection are concerned. The set price system in particular contains elements of complexity not present in the marketing of goods whose prices are variable. Let us analyze some possible methods of shifting under this system, in which shifting is most difficult. Competition in other goods may take the form of variations in quality at a given price, or of price with a given quality, or it may perhaps take both forms. Under the set price system, however, there can be no competition in price. Only quality is variable, and competition becomes a matter of quality instead of price. This fact is enough in itself to make impossible any attempt to foretell what the effect of a given change in producer's price will be. It might be possible to adjust the change in price so that the goods affected would not be reclassified in a higher priced group. But it would certainly not be possible to foretell whether changes in quality would result.

If the producer's price is changed, there are at least four methods of shifting to which middlemen may resort, supposing the change to be so slight that reclassification of the goods at other customary set prices is impracticable.

(1) The retailer, or perhaps the producer or jobber, may openly advertise that the cost has been increased, and introduce a new set price midway between two old ones; or the new price may become the common one without any specific explanation. Nine tenths of the men who buy linen collars, for example, purchase them at the price of "two for a quarter." The next higher set price for this grade of collar would doubtless be three for 50 cents, or possibly 15 cents apiece; the next lower, three for 25 cents, or perhaps 10 cents apiece. Collars of only a slightly higher grade may be bought at "quality" stores at the present time at three for a dollar, or 35 cents apiece, while a slightly poorer quality may be purchased from mail-order houses and some other establishments at six for 59 cents, or a price approximately 10 cents each. How much pressure would it take to introduce the "quality" store's set price as the price for all stores? How much of a reduction in cost would bring the ordinary price down to that of the mail-order house? Who could prophesy whether or not such a change would result from a change in the cost of producing or marketing collars? It would not take place in a month, and might not in a year. It certainly would take place inside of five years, if the whole collar trade felt the increase or decrease in cost, and no other way of escape were open.

A further illustration may be found in the automobile industry, where an early tendency toward set prices has been entirely overcome by numerous and sweeping reductions in cost of production. It is only a few years since motor cars were known as "thousand-dollar" cars, or "twenty-five hundred dollar" cars, etc., the tendency being to sell at prices around the multiples of \$500, and at even hundreds of dollars. Now one may buy cars for \$395, or \$440, or \$985, or \$1295, or \$2075, and so on. And this increasing variety of prices has, curiously enough, accompanied an increasing standardization of parts and equipment. All these cars, with the possible exception of the two lowest priced, are "fully equipped," "standard" cars. How much change of this sort is required to break up a set price system altogether?

That it is possible to raise a price, on the ground of maintaining quality, or improving it, outside the set price system, is seen in the case of at least three automobile companies within the past three years. Within a few months an eight-cylinder machine has been raised in price, from a little below to a little above \$2000, on the ground that the company could not make a profit at the earlier price without reducing the quality of the material put into the machine. How great a change in cost would compel producers or sellers of set price goods to take a similar step?

(2) Another course open to producers and distributors of set price goods when costs are increased is that of deception in the classification of goods. A part of the goods formerly sold at one set price may be slightly altered and put in the group of goods next higher priced. This is not infrequently done in the case of goods sold to ladies. For example, a 15-cent toilet soap may sell for 25 cents with a different name and a fancier wrapper, and perhaps a slight difference in perfume or shape of cake. This practice is especially fruitful where the appeal is to personal taste and a higher price becomes in itself an element of increased utility.

Outside of set price goods, the writer knew of an article of builder's hardware sold in two grades, with a very slight difference in finish. The cost of the two grades was practically the same, and one finish about as good as the other, but the intention was to appeal to two classes of buyers by selling practically the same commodity at two different prices. How much change in the cost of set price goods would be necessary to introduce or increase similar practices in the sale of such goods?

It is necessary to distinguish here, as in all the cases cited in

this paper, between what one merchant or producer may do and what may be done by all the merchants or producers having to do with a commodity, when all are affected. In the long run, the individual merchant who habitually resorts to any of the practices outlined here, is likely to suffer at the hands of his competitors, if they adhere to conventional methods and prices. But when all merchants who carry the goods affected are subject to the same increase in cost, their common necessity, directed by common business experience, will certainly lead most if not all of them to shift the cost in the easiest way. It may be that not all of them will shift the increase in the same way, although in these days of trade papers and trade organizations there is a tendency for all to resort to pretty much the same method. It is certain that there will be few who do not before long shift the cost in some way.

(3) A third mode of shifting an increase in cost, already referred to, is reduction in quality instead of increase in price. If one doubts that costs may be shifted by deteriorating the quality of a good instead of raising the price, he has only to consider the various grades of "all wool" suitings, and the development of the shoddy industry. Or a further illustration may be found in the boot and shoe industry. Ex-Governor Douglas, one of the largest manufacturers of shoes in this country, has been quoted as saying that the tariff on hides, while it lasted, cost the people of the United States millions of dollars in poorer shoes; and during the last session of Congress, some one proposed a "pure shoe" law, to prevent the use of paper-fibre in counters and other exposed parts. Both ready-made clothing and shoes are classic examples of set price goods. Is it not possible, not to say probable, that widespread adulteration, enduring over a long period of years, has been due to increasing costs which could not be so conveniently met by changes in price as by adulteration in quality?

(4) A fourth course of action may be undertaken under certain conditions if there is no other mode of escape. If it is impracticable to change either price or quality, the increase in cost may gradually be shifted to other commodities, although the economist dislikes to admit that this is possible. In many lines of retail merchandising and some lines of manufacture there are commodities which are everywhere handled as a regular part of the business, but which, owing to conditions which have grown up with the trade, yield little or no profit. The merchant does not expect to make a "fair" profit on them, but makes up his loss by securing

large profits on certain other goods. He expects his business to pay him *on the average* his customary annual rate of profit, though part of his stock regularly yields him less and part regularly more. Here again, if only one merchant or manufacturer had a loss to recoup, he would not, of course, be able to do it in this way. Competition would deprive him of many or all of his customers. But when the loss of profit on certain articles is common to the business, having to be borne by all those engaged in that business, they can, as a group, make it up, and no business man would question that, year in and year out, they would do so. A common example of this practice, outside of set price goods, is found in the case of grocers and sugar. Compare an ordinary grocer's rate of profit on sugar and coffee. In the hardware trade certain grades of hinges and butts supply a parallel from the manufacturer's standpoint. He makes little or nothing on barn-door hinges, but recoups his loss on fancy butts.

This practice obviously would be available for set price goods only in the case of goods generally handled by merchants or manufacturers dealing in other goods not subject to set prices. It is true that this is not the case with many of the most conspicuous examples of set price goods, for example, men's ready-made clothing, hats and caps, and ladies' ready-made suits, cloaks, and skirts. Dealers whose business is confined to set price goods can resort to this method of shifting only as some one or more of their wares, not affected by the increase in cost, has a demand so inelastic that a shift in classification is practicable.

I do not intend to maintain that resort is likely to be had to this method of shifting in any case if any other method is available, much less in the case of set price goods; but it is a possible method under certain conditions and must be reckoned with, however remote the probability of its occurrence.

It is, to be sure, more or less repugnant to the economist to suppose that the shifting of taxes can ever take place in this way, his reasoning being that, if the price of a commodity could be raised to the dealer's advantage after a tax has raised the price of some other commodity, it could have been raised, and would have been raised to the point of maximum advantage before the tax was levied, and therefore could not be raised without loss afterward. This conclusion is based on the assumption that the entire economic machine is tuned up by the economic motive to the point of maximum gain and maximum efficiency, an assumption which, we have

come to recognize, is not strictly true. At any rate, it is certain that some goods are regularly sold at rates of gross profit which do not cover all the expense involved, while other goods are selling at the same time and place at prices which yield a very large rate of profit, no monopoly element being involved in the one case more than in the other. The usual explanation for this phenomenon is that the profitless commodities are used as an attraction to draw trade in profitable goods. This was true of the hinges referred to in a previous paragraph, and is true of sugar and flour in the grocery business. The point is, that a trade habit once formed tends like other habits to perpetuate itself and to ramify its activities. Is it not possible under the conditions described that, in the case of other more or less standardized goods with a very large demand such as these have, an increase in cost occasioned by a tariff duty may be shifted in this way, if all other ways are closed and all dealers are affected alike?

In the foregoing analysis of modes of shifting taxation, I do not pretend to have exhausted the possibilities. There remains, for example, the case of joint products, of which one may be protected while the others are not. I have merely attempted to point out a sufficient number of possible cases to show the futility of an attempt to so adjust a protective duty that it will not be shifted to the consumer. If no method of shifting is possible, the result will be, if our theory is worth anything, that the marginal competitors will be forced out of business, or that the business will fail to grow proportionately with the growth of population. This is a long-run result, to be sure, but not a very long run is required for its accomplishment. In five years the readjustment would certainly be effective in a country whose rate of growth is as great as ours. Five years is not a "long run" for the working out of an economic change. A tariff act which does not contemplate results five years distant has no claim to be called "intelligent." When a duty is reduced it may take more than five years to wear out the machinery used in the industry affected or to convert the buildings to another use, so that the business may be run at a loss for a time rather than lose the entire investment. When an infant industry is protected, more than five years is likely to be required for its firm establishment.

There is one condition in the existence of which the tax may not reach the consumer's purse. If competition has been sluggish and dealers have grown careless, the increase in the producer's

price may be absorbed in the tightening up of the control of expenditures by the dealers, so that the total cost incurred by them may not be greater or may even be less than before. But if this can be done after the change in duty, it could have been done before it and without it. The tariff has no necessary connection with the scientific management of business. Indeed, the question may well be raised, whether tariff duties will ever, except in rare instances, bring such economies to pass—whether, on the average, costs made up by high prices before, will not be met in the same way after an increase in duty. That economies in the distribution of goods can be and are being brought to pass, is well known. But it would be difficult, I suspect, to find many instances where such economies resulted from an increase in protection. Indeed, there is more ground for the familiar free-trade speculation, fairly well borne out by concrete instances, that protection, instead of leading to economy on the part of the middleman, perpetuates waste on the part of the producer. It is equally possible that laxity in business may be corrected at the consumer's expense, when costs are raised. For example, services in the way of delivery out of town and the like, formerly performed free of charge, may, after the increase in cost, be performed only for payment.

There are too many possible ways of shifting a protective duty, to make it reasonable to assume that the consumer does not bear the burden of it, merely because no change in the consumer's price can be found. And even if all the possible shiftings could be discovered after the duty became effective, it would be impossible to forecast what would happen in advance.

Professor Emery anticipates that one objection raised against his suggestion will be that "it is impossible to secure a sufficiently accurate knowledge to be of practical use." His experience in the work of the Tariff Board leads him to believe that adequate information can be obtained. If the tariff can not be so revised as to throw its cost upon the middleman, as I have endeavored to show, it is, of course, of little avail to discuss the possibility of securing information adequate for the purpose of so revising it. I should like to point out, however, that in the case of many duties it is not even possible to trace that apparent incidence which Professor Emery believes is the "actual effect" of the duty. In the case of the removal of the duty on wool, which he uses as a typical case in the article under discussion, he plainly shows that it could not be done. After briefly going into an analysis of the cost of a

ready-made worsted suit retailing ordinarily for \$23, he says: "Whether so small a reduction [as would be brought about by the repeal of the wool duty] would redound to the benefit of the consumer or be absorbed in the process of distribution is, of course, something that could be finally determined only by experience. It is not by any means to be assumed that the consumer would get his suit 50 cents cheaper. On the other hand, if the consumer's price were reduced at all it would probably be reduced by more than the 50 cents, because of the fact that the suit would be thrown into a lower-priced class." In other words, the data obtained by Professor Emery's own board and compiled under his direction are not "adequate for the purpose" of adjusting a duty on wool as he suggests.

Again, illustrating the complexities involved in tracing the supposed effect of the change in the duty on the worsted used to make this suit, he writes: "Here again the question arises as to how far this saving on the cost of cloth, to wit, less than 5 per cent on the price of the suit, would be reflected in the actual price paid by the consumer. . . . The mere fact that the clothing manufacturer could get his stock somewhat cheaper from the English cloth manufacturer than from the American does not necessarily mean that the price to the consumer would be reduced." "On the other hand," he continues, "any one thoroughly conversant with the range of mill prices, jobber's prices, and retail prices over a period of years, can probably predict the change with a fair degree of accuracy." The Tariff Board had as much opportunity to become "thoroughly conversant" with the facts as to wool and woollens as any board or bureau is ever likely to have, with industrial traditions such as are ingrained in the character of American business men. Yet Professor Emery can not tell from his data what the apparent incidence of the Underwood duty on worsteds has been or would have been at the time his data were compiled. If it is impossible to predict, even "with a fair degree of accuracy" in the case of a commodity no further removed from the consumer than a manufactured raw material, how can we hope to arrive at adequate information in the case of raw material unmanufactured, and of machinery to manufacture it, and of the raw material to make the machinery?

In those simpler cases, in which the apparent effect of a change in duty is shown, a duty of so much per cent raising the consumer's price and another somewhat smaller producing no change

in it, the effect is only apparent, as I have shown. If there is any truth in the contentions I have urged, such figures only show that there is or is not an immediate shifting of the tax by a change in price. They give no clue whatever as to whether resort may be had to other methods of shifting. Far from proving that the consumer does not bear any burden, Professor Emery's instances only illustrate the futility of attempting to trace the incidence of most protective duties by means of inductive investigation. The final incidence of such a tax can not be ascertained in the market-place except in the simplest and least characteristic of cases for the very reason that "the complexities are so great, and conditions change so rapidly." If it be true, as Professor Emery leads us to infer, that the only sound economic argument, the only "intellectual justification, for permanent protection, is to be found in such considerations as these, the justification is indeed an empty one. But Professor Emery is to be congratulated for the frankness with which he states his case. It is not often the economist-protectionist has stated so squarely the grounds whereon he stands.

HARVEY A. WOOSTER.

Yale University.

Note in Rejoinder

Through the courtesy of both Mr. Wooster and the Editor, I have been allowed to read the above article in advance and to add this note which has in turn been read by Mr. Wooster. Our common object is, not to prolong a controversy but to avoid any question of misunderstanding and to make plain just where the issue is joined.

A preliminary word is perhaps desirable as to "long run" and "short run" effects. The reader will of course understand that in disregarding the former in my article, I did not lay down any general principle for the treatment of economic problems but confined myself solely to the tariff problem and even here only to a portion, even if a goodly portion, of the many possible cases. My reason is that I consider it proved by experience that in such cases, under our dynamic system of production and marketing, all the elements of the problem may be completely changed before the assumed long-run forces have any chance to operate. Mr. Wooster holds the view that in some measure these forces operate from the beginning and hence are themselves among the factors which bring about the complete change and help determine its character. He

believes that the continued assumption of the working of the long-time forces is a help for the practical problem. On the other hand, I feel that they work so slowly, while the dynamic changes come so rapidly, that this continued assumption is often a hindrance.

On the general theory of incidence, in its relation to the theory of value, I have made only a negative contribution. My article did not set up a new theory, but attempted only to show that in the matter of actual changes of tariff rates it frequently does happen that the consumer does not pay (or gain) the difference—and that in other cases he pays (or gains) more. I can not agree that destructive criticism is valueless or involves the unconscious assumption of a different general theory which ought to be made explicit. It may be that purely empirical studies yield no general principles. They may, however, suggest both the need and the basis of a new line of deduction. I have hoped that some economist abler than myself might be helped toward a more satisfactory expression of our theory of value by such purely factual studies.

Mr. Wooster's own modifications of the general theory are admirable. He belongs to that group of writers with whom I find myself most in accord, because of the extent to which they are willing to go in this regard. The question may well be left on his own showing. In his fourth method of shifting, he treats the total volume of sales by a retail establishment as a "joint product." I think this is correct, but it is going far when we come to practical questions. Imagine a consumer asking the old-fashioned economist, "What will happen to me if the cost of sardines at the factory is increased 10 per cent?" The answer would have been, "Your price will be ultimately raised by that amount or more." But the new economist will say, "Very likely you won't notice a difference, but the increase must be met somewhere, and perhaps your neighbor will pay more for his canned corn."

What I have questioned is the utility of a theory thus modified for practical legislation. Perhaps the issue may be put figuratively by considering our theory of value as a machine. Is it outworn to such an extent as to be scrapped? One man will say, "It is worn and patched, but it is absurd to scrap a machine till you have a new and better one ready." Another will say, "As long as we think we can get along with this, no one will invent a better one for us. Even a temporary return to hand-labor (Empiricism!) is better than such a cumbersome method."

The second main point is that of the utility of investigations by

a tariff commission. If such investigations are not valuable for practical use by the Ways and Means Committee, they had better not be undertaken. Most economists think they are not; most studious members of the Ways and Means Committee think they are. I regret that I was forced into a seeming inconsistency by excessive modesty. Mr. Wooster understands me to confess, through my phrase, "such questions can be finally determined only by the test of experience," that even the Tariff Board could not tell what would be the result of the changes in the wool and woolen schedule. I mean no more by the phrase than a recognition of an uncertainty in all human affairs. The Tariff Board *was* in a position to tell pretty definitely what the effects of these changes would be; and if such a commission is not able to make successful predictions of this kind, I agree it is not of much use.

Finally, I take issue with Mr. Wooster on his contention that these investigations into prices would not be adequate because they tell nothing as to other methods of competition besides price changes. It is a fair criticism to make against my article in the REVIEW, in which these other matters were not taken up. But they *should* be taken up by any commission and they *were* taken up by the late Tariff Board. Mr. Wooster's unfortunate reference to the "development of the shoddy industry" is a good illustration of the need of making empirical studies of the facts rather than assuming probable methods of shifting the burden to the consumer. The use of shoddy in woolen clothing (whether a good thing or a bad thing) has decreased not increased. Another good illustration is in the question regarding the effect of a tariff on the adoption of efficient and up-to-date methods. One may speculate indefinitely as to what would probably happen in a hypothetical industry. One can find out the facts by an investigation of an actual industry, and for practical tariff-making that is the important thing—*viz.*, to know what has been the result of some particular schedule. Investigation shows that one thing is true of one industry, and quite a different thing of another industry. Many of these matters were examined by the late Tariff Board and I believe that all the methods enumerated by Mr. Wooster could be covered in a practical and serviceable manner.

HENRY C. EMERY.

THE FARMER'S INCOME

The object of this paper is to estimate the average amount of income received by farm families in the United States during the census year 1909. A bulletin on the farmer's income by W. J. Spillman, based on preliminary census figures, was issued by the Department of Agriculture on July 19, 1913; since that time more detailed statistics have become available and investigations by the Department of Agriculture have supplied a basis for estimating certain items omitted by the census.

The following table presents a summary statement of the farmer's business for the year 1909:

Income and Expenditures of Average Farmer: 1909.

Items	Total	Per farm
INCOME		
Value of crops ¹	\$3,250,359,348	\$511
" " " live-stock products ² ..	1,124,678,632	177
" " " animals sold and animals slaughtered on farms.....	1,833,151,031	288
Value of house rent and of food and fuel consumed by family and not reported by census (estimated) ..	1,653,934,100	260
Gross earnings of farm and farm family	\$7,862,123,111	\$1,236
EXPENDITURES³		
Labor, fertilizers, feed, seed (estimated), threshing (estimated), animals purchased, taxes (estimated), and miscellaneous.....	\$2,750,344,281	\$432
Maintenance charges	505,979,322	80
Total expenditures	\$3,256,323,603	\$512
Net earnings of farm and farm family	\$4,605,799,508	\$724
Interest at 5 per cent on value of farm property (earnings of farm).....	2,049,148,628	322
Earnings of farm family	\$2,556,650,880	\$402

¹ Exclusive of crops fed to live-stock on home farms.

² Including dairy products (except milk and cream consumed on the farm), poultry products, honey and wax, and wool and mohair.

³ Exclusive of value of unpaid family labor.

The first item in the table is the value of crops exclusive of crops fed to the live-stock on home farms. The value of crops fed

was ascertained in the following manner: The total value of feedable crops, that is, corn, oats, barley, hay and forage, kafir corn, emmer and spelt, was \$2,786,000,000; of this amount \$509,000,000 represented the value of the feed sold by the farmers and \$40,000,000 was the estimated value of the corn consumed by the farm families in the Cotton Belt (at the rate of \$20 per farm), leaving \$2,236,000,000 as the value of the crops fed to the live-stock on home farms. By subtracting this figure from the \$5,487,000,000, which represents the total value of all crops, we obtain the value of crops not fed to the live-stock on the home farm, as given in the table.

To the net value of crops is added the value of live-stock products and of animals sold and animals slaughtered on farms, aggregating \$2,958,000,000. In addition to this the farmer had the use of his house, and some fuel and food supplied by the farm and not enumerated by the Census Office. An estimate of these items has been obtained on the basis of Farmers' Bulletin No. 635, by W. C. Funk, of the Office of Farm Management, entitled *What the Farm Contributes Directly to the Farmer's Living*. Mr. Funk's investigation included 483 farm families scattered widely over the United States, and his conclusion was that the average farm family receives about \$125 as rental value of the farm house, about \$35 as the value of fuel, and about \$47 as the value of milk and cream consumed on the farm. In connection with the item for rent it should be kept in mind that the farmer has been charged with 5 per cent interest and with maintenance on his entire property including his house, so that it is necessary to credit him with the rental value of his house in order to offset these items of expenditure. It may be that Mr. Funk's average of \$125 is too high for the United States as a whole; if that be so, the income of the farmer as given in the table is above the true income by that excess. According to Mr. Funk's figures, \$207 should be added to the average income of the farm family on account of rent, fuel, and milk and cream consumed, none of which is included in the census returns. Furthermore, the poultry and eggs, the pork and beef, and the vegetables and fruits consumed by the farm family are not completely covered by the census enumerator. No satisfactory way of estimating the value of these omitted items is available, but Mr. Funk's bulletin places the total value of the food supplied by the home farm at \$261, of which about \$150 was represented by pork and beef, poultry and eggs, apples and

peaches, and Irish and sweet potatoes. It seems certain that the \$47 for milk and cream can safely be raised to \$100 to cover all these additional items; and the total for house rent, fuel and food not included in census returns, but supplied by the farm, thus becomes \$260. When to this figure is added \$161 as the value of food supplied by the farm and presumably counted by the census enumerators, the total value of what the farm contributes directly to the farmer's living appears to be \$421.

The total earnings of farms and farm families arrived at in this way were thus about \$7,862,000,000, or \$1,236 per farm. The farm expenses were obtained through a combination of census figures and estimates based on agricultural surveys. The amounts expended on hired labor (\$651,000,000), on fertilizers (\$115,000,000), on feed (\$300,000,000), and on animals purchased (\$840,000,000) were given by the Census Bureau. In addition to this, estimates were made of the amount expended for seed and for threshing charges. The estimates of the expenditures for seed were based on the acreage of each of the principal crops, the average number of bushels used for seed per acre in the different regions of the United States, obtained by correspondence with agents of the Department of Agriculture, and the average value of seed per bushel, obtained from the Census Reports. This item totaled about \$200,000,000. The expenditures for threshing were estimated at about \$90,000,000 on the basis of the acreage of the crops, together with information collected by the Department of Agriculture on the expenditures for threshing in the different regions. The total for all enumerated items of expense was thus about \$2,195,000,000, or \$345 per farm. To this was added .6 of 1 per cent of the value of farm property for taxes, and a maintenance charge of 5 per cent on the value of buildings, and of 15 per cent on the value of implements and machinery, bringing the total amount of farm expenses to \$2,947,000,000. This figure was increased by 10½ per cent for miscellaneous expenses including overhead charges, an estimate based on Farm Management surveys; so that the total expenditures were about \$3,256,000,000, or \$512 per farm, leaving net earnings per farm of \$724 available for family expenses, for payments on indebtedness, and for savings. This amount includes the interest on the investment, which at 5 per cent is \$322, leaving \$402 as the earnings of the average farm family.

The interest paid by farmers on their mortgages should be sub-

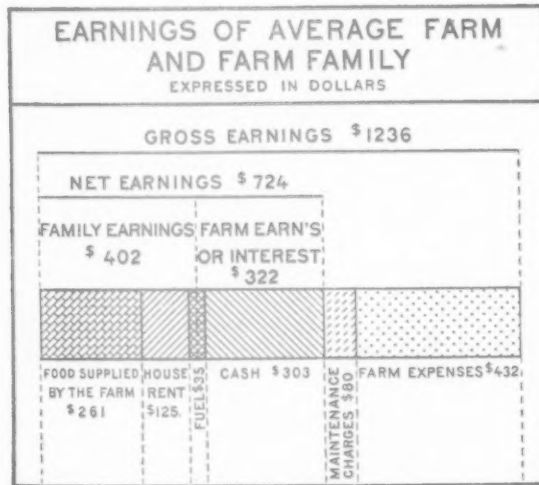
tracted from their net farm earnings, but not from the earnings of farm families; no satisfactory statistics of mortgage indebtedness, however, are in existence, since the census reports this information only for farms operated by their owners, of whom one third reported mortgages. If the proportion mortgaged were the same among farms operated by tenants as that among farms operated by owners, and if the average size of the mortgages were the same, then the average interest on mortgages paid by farmers would amount to about \$34 a year, and their net earnings (including interest) would be \$690, instead of \$724. The average mortgage is probably not so high, however, because the farms operated by tenants are likely to have proportionately fewer mortgages and also, perhaps, a lower average amount of mortgage. At any rate this amount would not materially affect the averages here presented.

One way of analyzing the farmer's income is to distinguish between the interest on his investment, the wages earned by his own labor and superintendence, the value of the unpaid labor of his family, and the profits of his enterprise. No information is available for apportioning the income between these elements, except that about \$322 represents interest, and \$402 includes all the other items.

In addition to the direct earnings of farmers derived from the value of farm products, the item of increase in the value of their property must be considered. The only way of estimating this increase is by subtracting from the total value of farm property in 1910 that for 1900 and dividing the difference by ten. This calculation gives an average annual increase in the value of farm property of \$2,055,000,000, or \$323 per farm, of which about \$242 was the increase in the value of land, \$44 in the value of buildings, \$8 in the value of implements and machinery, and \$29 in the value of live-stock. A part of this increase in value is the direct result of the farmer's labor in improving his farm, while another part is the farmer's share in the increase of the nation's wealth. Owing to the fact that the census of 1900 was taken in June and that of 1910 in April, the increase in the value of live-stock is an understatement. The increase in the value of farm property, in so far as it is real, represents a capitalization of the increase in the value of farm products, and the farmer receives interest on the increase in the shape of greater returns for his crops. It is probably true, however, that a certain amount of the

increase in the value of the land represents an over-valuation by its owners, which may never be realized by them. Even if it is a genuine value for 1910, the farmer may not reap the benefit of that value unless he sells his farm, for the price of land may decline. Thus the farmer's prosperity, like that of any other independent business man, is dependent on a large number of factors over many of which he has no control. The amount of products for a given year depends in part upon the farmer's industry and foresight and in part on weather conditions; the price received for the principal products sold is very largely determined by conditions in the world market and is in large measure beyond the influence of the farmer. The increase in the value of his land and other property reflects the income that he received for his products during previous years, and is influenced by the growth of population, the extension of transportation facilities, and many other factors.

The figures on farm income are summarized in the graph below.



The graph shows that after all the expenses are paid the average farm family has \$724 of net earnings, of which \$322 was earned by the capital invested in the farm, and \$402 by the labor of the farmer and his family. The \$724 of net earnings were received by the family in the following manner: \$303 in cash, \$35 as fuel, \$125 as rent, and \$261 as food furnished by the farm.

The limitations of these figures on farmer's earnings should be clearly understood. In the first place they are average figures

for the United States as a whole, covering decidedly varied conditions in different parts of the country. Figures for individual localities would be more illuminating, but detailed information for regions is not available. It is probably true also that in the figures for the United States as a whole the errors are more likely to balance each other than they would be in figures for smaller areas. Considerably more significant than averages would be figures giving the number of farmers in each income group, but such figures do not exist. It should also be mentioned that no attempt is here made to draw a distinction between the income of farmers cultivating their own land and the income of tenant farmers who have to depend almost entirely on what the family earns by its labor. Another limitation of the figures is that they apply to the year 1909 and may be very different in any previous or subsequent year. It may be said, however, that 1909 was a fairly representative year and that the data are as satisfactory for that year as they would be for any other single year. Another limitation is that the census definition of a farm includes small farms in the neighborhood of large cities, whose owners derive their principal revenue from other pursuits than agriculture. It should be mentioned, however, that no farms under 3 acres are included in the census enumeration unless they produced \$250 worth of crops or gave full-time employment to at least one man. In view of the fact that there were only 18,000 farms under 3 acres in 1910, forming about .3 of 1 per cent of the total number of farms, and that farms of over 3 acres are probably in most cases in the hands of genuine farmers, this limitation is not serious. Even operators of good-sized farms often add to their income by working part of the time on other farms or at other trades, but money earned in this way is not included in our figures. This item is of considerable importance in some regions but would not materially affect the averages for the country as a whole.

Finally, in stating that the average farm family earned \$402 in 1909, it should be kept in mind that the cost of living on the farm is very low as compared with that in the cities. The farm family produced and consumed food valued on the farm at \$261; in the city this same food would cost at least \$100 additional, the item for rent, considering accommodations, would be higher than \$125 in the city, and fuel would cost more than \$35. The \$400 earned by the farm family would thus probably correspond to an income of \$600 or more received by an industrial worker in the

city, and two thirds of the farmers have, in addition, the interest earned by their investment. Furthermore, while the farming group is not entirely or even nearly homogeneous, it is nevertheless true that the extremes of wealth and poverty are not represented in it, and that the average is not composed of as widely divergent elements as would be a similar average for an industrial group.

It might be said that the earnings of farm families as here given do not materially exceed the earnings of one adult farm laborer at the rate of \$80 a month and board. The figures do not, indeed, speak of large wealth and do not seem to offer brilliant opportunities for young men seeking a short road to affluence; nevertheless, it is probably true that the farming population of the United States, consisting as it does of more than 30 million people, has a larger average income per family than any other equally homogeneous group of individuals of anything like the same size anywhere in the world.

E. A. GOLDENWEISER.

THE INFLUENCE OF SPECULATIVE MARKETING UPON PRICES

The development of the modern methods of wholesale produce marketing is usually associated with speculation. The markets are attacked because they foster speculation and defended because speculation renders substantial services. In recent literature devoted to the practices of the cotton exchanges much emphasis has been laid upon the non-speculative functions of the market. The "hedge" and the various forms of "arbitrage" deals are all well known, their importance is clearly recognized in all the exchanges and boards of trade, but general discussions of the price structures of modern markets have been almost exclusively concerned with the influence of speculation upon prices. It is assumed that the organization of speculative trading is the most distinctive feature of our wholesale markets. The speculative element is assumed to be more influential today than in the past, and, consequently, it is presumed that prices must be more nearly stable, both throughout the season and from season to season.¹

The fact that speculation must needs stabilize prices is patent to all, but the statistical studies of market quotations do not disclose the increase in stability that is anticipated. The more notable American studies are those of Mr. Brace and Professor Emery. Both are inclined to doubt the significance of the statistical demonstration. Mr. Brace says:

It must be admitted, however, that the results shown are inconclusive, and that allowance must be made before any one should consider them of much weight upon either side of the controversy.²

Professor Emery is not quite so skeptical:

The foregoing figures of price variations cannot, however, be accepted as an entirely accurate indication of the influence of speculation.

¹There is an extensive literature upon this subject both in Germany and in the United States. The American writers seem to have been largely influenced by the Germans. The more notable studies are:

M. Kantorowicz, "Die Wirksamkeit der Speculation im Berliner Kornhandel, 1850-1890," *Jahrbuch für Gesetzgebung und Verwaltung*, 1891, pt. III, p. 221.

David Kohn, *Der Getreideterminhandel* (Leipzig, 1895).

Bunzel, "Der Terminhandel, seine Volkswirtschaftliche Bedeutung und Reform," *Zeitschrift für Volkswirtschaft, Socialpolitik und Verwaltung*, 1897, p. 385.

Ruesch, "Der Berliner Getreidehandel unter dem deutschen Börsengesetz," *Jahrbücher für National-Oekonomie*, vol. 33 (1907), p. 145.

²H. H. Brace, *The Value of Organized Speculation* (Houghton Mifflin, 1913, p. 58).

In the first place they are summarized in the rough form of averages, and do not pretend to be more than fragmentary. Incomplete as they are in this respect, however, they do show a pretty uniform tendency toward a lessening of price fluctuations.³

Elsewhere, he says, "Nevertheless, the fluctuations under a speculative system are still large."⁴

These statistical demonstrations fail because the facts are not as presumed. It is not true that the organization of speculation has sufficiently increased the significance of the stabilizing tendency to produce notable reductions in the fluctuations of average prices. Nor is it true that the improvements in the technique of modern markets have been most conspicuous with reference to speculation. The statistics used by Professor Emery and Mr. Brace showed some slight increase in the stability of prices between the middle of the nineteenth century and its closing years. The results were not notable but they did seem to bear out the thesis. Had the statistical studies been carried back to a somewhat earlier period, the futility of these methods would have been clear. It is a matter of common knowledge that great changes in the forms and technique of marketing occurred in the first half of the nineteenth century. The transition to the new order was not completed at the same date in all countries, but in general the modern organization of speculative trade grew up at this time. Any statistical demonstration should reflect this great transformation. Statistical material for a study of this earlier period is not readily obtained, but Jacob's *Reports on the Corn Trade*⁵ have preserved price figures for the continental export districts which are fully adequate to the needs of a study comparable in all respects to those made of the organized markets of the nineteenth century. In Jacob's first report, the high and low prices of all kinds of grain at Danzig are given for each year from 1703 to 1825. High and low prices at Cracow are given month by month for the decade 1814 to 1824. Average prices per month are given for Mecklenburg wheat in the Hamburg market for the years 1791-1822. Some of these statistics thus fall within the period that is usually associated with the rise of modern methods. The text of Jacob's reports, however, affords fairly clear evidence that changes in organization which may have begun elsewhere were not taking place

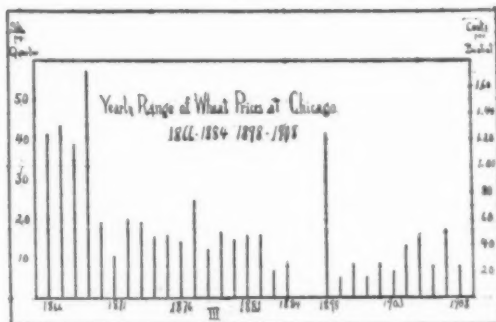
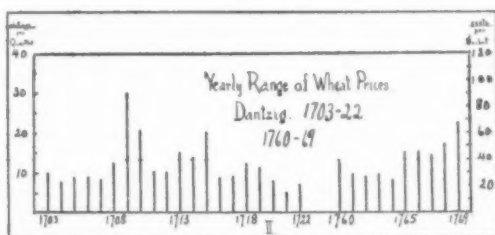
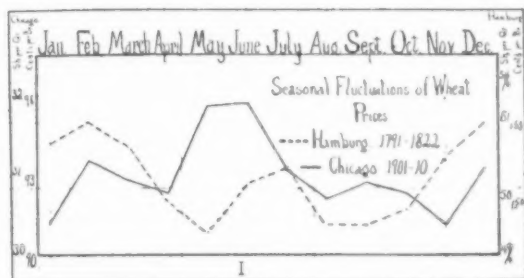
³ H. C. Emery, *Speculation on the Stock and Produce Exchanges of the United States*, Columbia University Studies (Longmans, Green, 1896), p. 127.

⁴ *Ibid.*, p. 125.

⁵ William Jacob, *First Report on the Corn Trade* (London, 1826).

in Germany and Poland. Methods and conditions of marketing were as they had been for a considerable period. Conditions were doubtless characteristic for the entire eighteenth century. We have, then, the means for a comparison of export markets of the old system with the market conditions of an export district organized more elaborately.

The annexed charts⁶ are made according to the principles followed by Mr. Brace. It will be observed that the prices quoted for these German markets have been reduced by Mr. Jacob to the Eng-



⁶ Charts, I, II, and III.

lish system of weights and measures. The unit of quantity is the quarter, which is equivalent to eight Winchester bushels. The difference between prices in terms of the quarter would thus be eight times as great as proportionate differences in terms of a bushel, so that it is necessary to plot these prices upon a scale which allows for this difference in the unit of quantity as well as for the difference in the monetary unit.

The most cursory inspection of these charts is sufficient to show that there is no significant difference in the degree of fluctuation in prices despite the great differences in the forms and methods of marketing. The average monthly prices are peculiarly significant because it is so often said that the modern mechanism of organized speculation is necessary to prevent wide differences in price throughout the season. The figures for Mecklenburg wheat at Hamburg show that such statements are without foundation in fact. Methods of trading at Hamburg were more nearly medieval than modern, and, none the less, the average monthly prices for twenty years exhibit no wider range than Chicago prices. This degree of stability must have been due to the presence of speculative influences in the Hamburg market. Even without a future contract and facilities for short selling, much speculation is possible and it is evident that there could be sufficient spreading of demand through the season to prevent serious troubles. In all probability the superior organization of modern markets is no more than sufficient to meet the increased difficulties that are created by the immense quantities handled and the extent of territory within the scope of market operations. Although the improvements in modern social organization have been notable, it is easy to exaggerate the actual effect of changes, and this is particularly true of these matters which affect the daily routine of life as intimately as the modes of distributing produce. We can do no more than reconstruct imaginatively the conditions of life in the sixteenth and seventeenth centuries when local markets were the only means of distributing produce. We think of these periods with an effort that makes them seem even more remote than they are. Modern methods represent a great increase in efficiency, but the nature of the change is easily misunderstood and its actual effect overestimated.

The significant changes in the modern system are twofold: the organization of speculation, and the separation of speculative and non-speculative transactions. These methods require significant

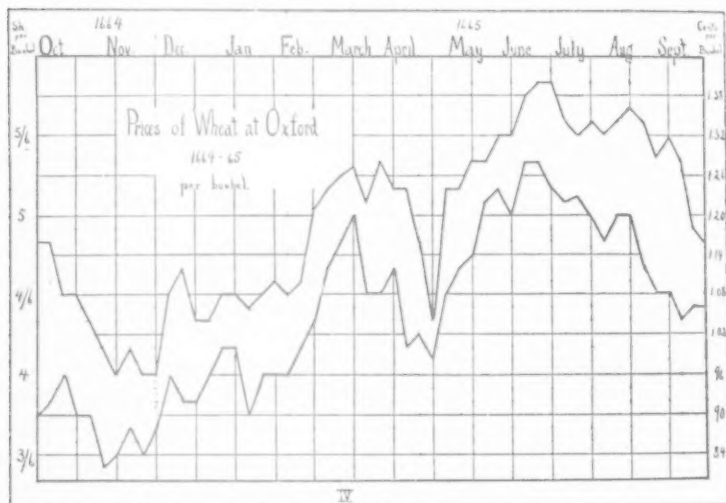
departures in technique, most particularly, careful standardization by experts, and trading in terms of abstract quantities and qualities rather than specific lots of produce physically present on the market. In the modern spot markets samples are exhibited, but they are chiefly significant with reference to the possibility of working over the stuff in order to make it grade higher. Oats, for instance, that are not properly bleached and clipped can be given a higher value by bleaching and reclipping. These technical differences are important because they separate the judgment of value in the abstract from the judgment of the quality of particular lots. The competition upon the market is more open and general, and differences of opinion are balanced more evenly than was possible formerly. These changes are definitely a result of speculative marketing, but they must needs be distinguished from the stabilizing tendency of speculation because they affect a different aspect of the market. Studies of speculation are concerned with differences in average prices: these differences in market technique appear most clearly in the ranges of price during the market day.

It is thus reasonable to compare markets not only with reference to the degree of stability of average prices, but also with reference to the degree of certainty expressed by the width of the range of prices at weekly intervals. For reasons which will appear later, graphical presentation is necessary, and of course all charts must be drawn to scale.

Full statistics of prices are not easily found, so that historical comparisons of the daily or weekly ranges in price are limited by circumstances. Some figures are available for England. Very complete statistics of prices and of quantities sold at Oxford were preserved by a local antiquarian and are now to be had in manuscript. For the five years, 1663-4 to 1667-8, these statistics have been put at my disposal by Dr. N. S. B. Gras.⁷ The Oxford figures may be regarded as adequately representative of a local market undisturbed by the presence of merchants from a large city. The chart of Oxford prices published here is neither the most erratic

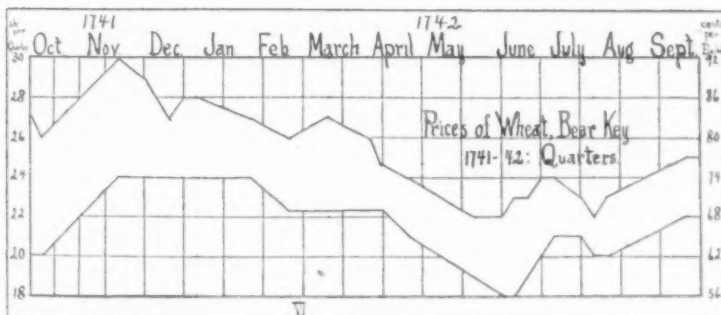
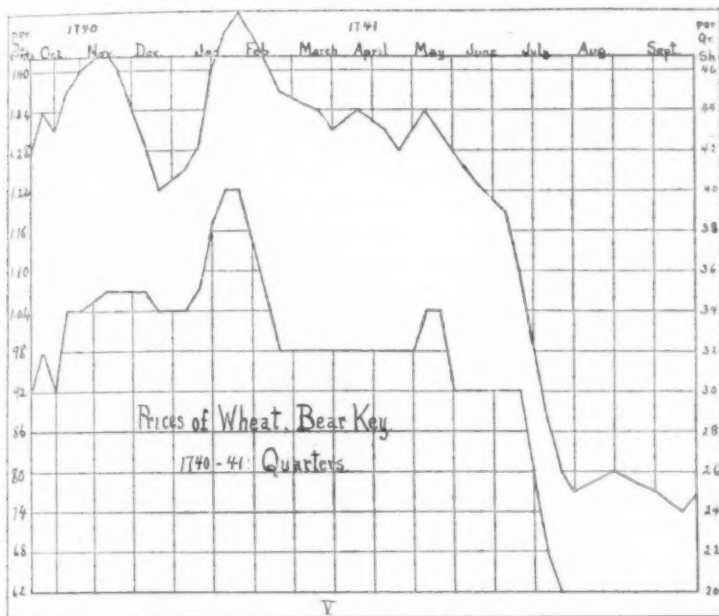
⁷These figures appear in *The Evolution of the English Corn Market*, by N. S. B. Gras (Harvard University Press, 1915). Appendix F.

of the series nor the most regular.⁸ In the concluding volume of J. E. T. Rogers' *History of Agriculture and Prices in England*, there is a long series of market quotations of London prices taken from the newspapers now preserved in the British Museum as the Burney Collection. The completeness and detail of these quotations is variable. In some years, entire months are passed over without note; for other years, quotations are given for each week of the year. The market at Bear Key is reported for every year from 1709 to 1758, when the transfer of trade to Mark Lane became sufficiently complete to render the Mark Lane market the more important of the two. Mark Lane quotations are given for the remainder of the period covered by the volume, concluding in 1793. Inspection of the figures suggests a division of the century into three periods: 1709-1730, 1731-1756, 1757-1793. The first and last of these periods were characterized by wide ranges of prices and erratic changes. The middle period, with the exception of three years, was relatively quiet. The range of price was narrower and in general the market seems to have been steadier.

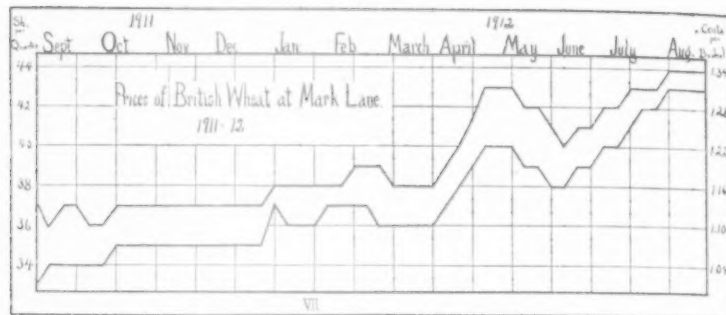


⁸ See chart IV.

Charts⁹ have been made of the movements of prices in the years 1740-1742 because these years represent the market at its best and also under the conditions which prevailed throughout the greater part of the century. The figures for Mark Lane in 1911-12 were taken from the *Mark Lane Express*.¹⁰ In plotting these prices,



⁹ Charts V and VI.



¹⁰ Chart. For Chicago, see Chart VIII.

allowance must be made for differences in the unit of quantity as well as for the difference in the monetary unit. All the London quotations are in terms of the quarter, consisting of eight bushels.

The increase in the efficiency of the market is clearly evident. The Oxford market was less satisfactory than our modern markets, but not seriously inadequate. The volume of business was small; it was unusual for sales to exceed 50 bushels on any market day and sales rarely fell below 20 bushels. The volume of trade at Bear Key was very considerable. All grain coming to London by sea was landed at this quay or key, whether coming from seaboard countries or from foreign ports. Importation from abroad was unusual in the early part of the century, but in the last quarter of the century importation from Baltic ports, directly or indirectly, was not uncommon. Grain was sold in large lots, usually by the boat load, and this fact probably exerted an influence upon the market. The grain was not graded and differences in quality must have been considerable. It seems incredible that differences of 8-10 shillings per quarter should exist on the market, and yet that is about the characteristic width of the range of prices for the greater part of the century. The explanation is probably to be found in two factors, the absence of systematic grading and the lack of systematic competition between the traders.

Some indication of the importance of grading is furnished by occasional notes in Rogers. Thus, for three weeks, in September, 1740, three figures are given for each market day:

38 s.	44 s.	52 s.
30 "	44 "	52 "
30 "	40 "	50 "

The high prices were paid for "fine old wheat." The market was thus given the appearance of being very wide because of a difference in the quality of the stuff. This could hardly have been of frequent occurrence. The distinction between old and new wheat is of some moment, but the quotations are distinct for a number of years and it is evidently not an explanation of the difference between eighteenth century and modern conditions. A distinction between varieties of wheat as definite as the red and the white wheats would seem to be of more fundamental importance. Separate quotations are given in the years 1748-9 and 1762-3. At these times, the quotations were very nearly parallel, and the range in price about the same for each type. Failure to distinguish these types would account perhaps for some extremes but not for the general range characteristic of this period.

The principal factor in this great range of prices is the absence of a systematic organization of competition. In a description of the market at Mark Lane¹¹ it is stated that the corn factors sat at desks or tables around the great courtyard of the Corn Exchange. They seem to have bought and sold upon the basis of samples, so that the general aspect of the place was not unlike the spot market of the Chicago Board of Trade. There was this difference, however: there was no wheat pit nor any active auctioning of lots and shiploads. In the eighteenth century, each deal was a private trade between two men; no one could know what was going on at another part of the exchange. Competitive buying and selling had not been definitely organized upon the local markets of the Middle Ages, but the restricted area and the small volume of trade had not required any elaboration of mechanism. When the old forms began to give way in the seventeenth century and buying by sample became common, there ceased to be much public competition. Both in France and in England the trade was transferred from the market place itself to the inns, cafés, or alehouses nearby.¹² Central markets, such as that at Bear Key and later at Mark Lane, would scarcely have shown this general

¹¹ H. Chamberlain, *History and Survey of London*. (London, without date, p. 553.)

¹² See A. P. Usher, *History of the Grain Trade in France* (Harvard University Press, 1913), pp. 92-94, 110; William Marshall, *Rural Economy of Norfolk* (London, 1785), vol. I, p. 195, vol. II, no. 80, and *Rural Economy of the Midland Countries* (London, 1790), vol. I, p. 229; and C. J. Fuchs, "Der englische Getreidehandel und seine Organisation," *Jahrbücher für National Oekonomie und Statistik*, vol. 20 (1890), p. 31.

demoralization as clearly as the tributary markets in the producing regions, but the difficulty was in some degree general. There was neither the disposition to organize a market to secure real publicity of competition nor knowledge of the mechanism necessary. The absence of a grading system made it impossible to bid freely as is done today, because there was no agreed standard of quality.

This view would lead to the conclusion that the grading system and the establishment of procedure in the form of an auction are very significant aspects of our modern markets. The dealing in futures is no doubt important, but it can not be regarded as of unique importance. It is part of an intricate system, a natural development of the organized trade; but there is ground for supposing that its importance has been somewhat exaggerated. The grading system is less impressive to the outsider, but of profound significance. The wild gesticulations and clamor of the wheat pit is astounding and perhaps appalling. It is said that our English neighbors contrive to do an immense business with less fuss and noise, but it is only fair to add that they are doing a somewhat different business. Whatever the apparent futility of such violence in action, the simultaneous auctions carried on by the sellers in the wheat pit are of fundamental importance.

The influence of the future contract and of active speculation by "bears" may be seen by a comparison of the relation of the upper and lower portions of the graphs. In the Bear Key charts and in the Mark Lane charts of 1911 there is no indication of active operations by the "bears" and in general they respond somewhat later to any change in conditions. As there is no future dealing at Mark Lane today, the significance of this element in marketing can be studied separately. In such markets the bears represent an essentially passive group operating upon certain presumptions of "bed-rock" prices. In the speculative market with future dealing the bears become active. There is pulling and hauling both ways. The bears may undertake to force prices down by heavy sales or the "bulls" may work prices up by active buying. Furthermore, both sides of the market are likely to move together. There are times, of course, when significant differences of opinion develop. The market then becomes wider. For the most part both parties are quick to appreciate the meaning of new facts and it is rare that conditions are so ambiguous as to lead bulls and bears in opposite directions.

The significance of the different statistical methods represented by the two types of graph is not entirely confined to demonstration of the influence of new methods of marketing. These methods symbolize concretely different conceptions of value. The graphs employed by Mr. Brace, plotting differences of range upon an horizontal base, represent the conception of value that is to be found in the writings of the classical school. Mill says:

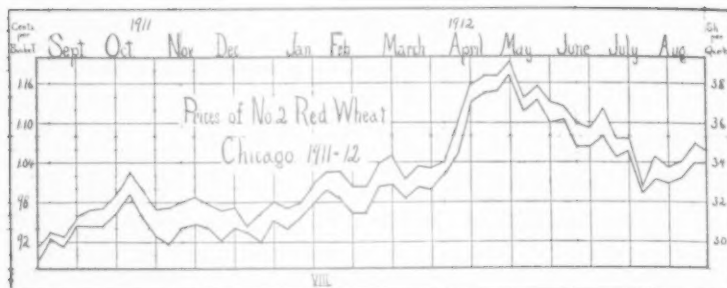
On an average of years sufficient to enable the oscillations on one side of the central line to be compensated by those on the other, the market value agrees with the natural value; but it very seldom coincides exactly with it at any particular time. The sea everywhere tends to a level; but it never is at any exact level; its surface is always ruffled by waves, and often agitated by storms. It is enough that no point, at least in the open sea, is permanently higher than another.

The standard by which prices are to be judged is thus an average of prices over a period of time.

This conception implies that the condition to be desired is one of complete approximation of prices to a straight line. Fluctuation would be regarded as unfortunate, indicative of a discrepancy between price and value. These views are probably characteristic of the mass of the people. In so far as they think consciously about value, they conceive it to be a sort of long run price—the usual or average price. The widespread currency of these opinions is doubtless an explanation of the distrust of the great produce markets. The constant fluctuation of prices seems unreal and constitutes evidence that things are not as they should be.

The graphs which present the ranges of price assume a different conception of value. It is not conceived to be fixed and unchanging like the sea level but is constantly changing in response to conditions. The variations of price are measured from a moving base. The practical difference of this conception is revealed by the fact that the width of the graph is in many respects different from the range of prices on any market day. A very wide range of prices does not produce a wide graph if prices are going up or down sharply. The judgment of each separate event is so definitely related to the whole trend of the market that no abstraction is defensible.

This will be evident from an inspection of the Chicago chart. On November 11, 1911, and April 13, 1912, the range in prices was about five cents. Any attempt to draw inferences from price ranges by a method of averaging, or by a method of plotting the range on the same base, as Brace does, would fail to find any im-



portant difference between the state of the market on these two dates. It will be evident that these identical ranges had different meanings. In November, the market was increasingly uncertain of what the future had in store; in April, everybody knew that prices were going up. In mathematical parlance, the differential is a variable upon a moving base, and the direction of movement is an essential element of comparison.

The theoretical importance of this conception lies in the recognition of the reality of many fluctuations in price. There is no tendency to represent absolute stability as the normal or desirable condition of a market, and this is certainly a notable gain. The market place is primarily concerned with change, and the efficiency of a market can be measured more nearly in terms of the degree of certainty than in terms of relative stability. Where there is a high degree of certainty, prices will be as stable as conditions will permit, and more can not legitimately be expected. Insistence upon the advisability of emphasizing the degree of certainty does not in any way imply that the reasoning about speculation and prices is wrong. The doctrine that speculation tends to stabilize prices is true, but it states only part of the truth. With reference to the recent improvements in the technique of marketing, increase in relative stability of prices has been insignificant. The conspicuous change lies in the great increase in certainty.

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Cornell University.

RUSSIAN LAND REFORM

Nowhere do the laws of economic society show closer resemblances in their effects in different countries than in the evolution of landed property in different parts of the world. These laws always give us land problems as perhaps the deepest and most fundamental of all our economic problems. We Americans do not see their complexity, because we are a new country which came into separate existence at a favorable period in agrarian history. We have land laws which correspond roughly to conditions in the eighteenth and nineteenth centuries; and because our agricultural life is still comparatively simple, and is still in the main in harmony with our system of land tenure, we are naïve in our treatment of land problems now that they are beginning to emerge. A good illustration is afforded by the assumption of single taxers, who think that by one single legal measure all our agrarian and other economic difficulties can be solved. But we also see naïveté in the hope cherished by some that a few other simple measures like the development of land credits can solve our land problems.

An illustration of our peculiar situation is afforded by the meaning of the word farm to the ordinary American and as contrasted with the meaning of the corresponding word in the older countries of the world. To the American the word farm calls to mind a single enclosed piece of land adequate in area to support a family, in other words, a consolidated "economic holding." It is doubtful if the corresponding word elsewhere in the world calls a similar picture to the mind of most human beings. Certainly to millions of human beings in Russia, in Germany, and Ireland, the corresponding word would suggest long and narrow strips of land intermingled with strips belonging by right of possession to other cultivators, these strips being sometimes one hundred times as long as they are broad and so small that frequently the average area would not exceed an acre. Furthermore, to the thoughtful, the word would call to mind almost insuperable obstacles in the way of good farming, because to reach the strips belonging to one man's farm it is necessary to cross strips belonging to other men's farms, and the work must proceed in common, making difficult, if not impossible, differentiation and improvement in culture. Enclosure means separating out these pieces of land and consolidating them as far as possible so that each man's holdings may consist of two or three separate pieces, the ideal of a single consolidated holding being impossible of universal attainment.

The present writer has seen this process going on in Ireland and has seen what is almost its close in England, while in Bavaria he has discussed, with the commission having the matter in charge, its progress in that state of the German Empire, where it will still take two or three generations to bring it to completion.

Dr. Wieth-Knudsen, in a work recently published, has made an exhaustive study of the land changes in Russia. In this volume,¹ the importance of which justifies an extended review, the author considers the dissolution of the Russian agricultural village, the *mir*, or, to speak more accurately, the *commune*,² which has been taking place under the epoch-making law, the *ukas* of November 9, 1906, and also the law of May 29, 1911. He discusses likewise the enclosure, if we may use the English word, of the peasant holdings, which followed the dissolution of the *mir*. This process in its rough outlines is similar in Russia to the English enclosures and also to enclosures which have taken place and are taking place elsewhere.

The word "enclosure" is an unfortunate one, as is the use of "common fields" in England, both leading to misunderstanding, which Professor Gonner in his *Common Land and Enclosure* truly says is "simply grotesque" (p. 73). While enclosure suggests putting fences around the land, it may be doubted if legally the fencing in of the land has anything to do with enclosure. As a matter of fact, after enclosure in England, the land has been generally fenced, but in many other countries an exactly corresponding change has taken place without fencing. In Epworth, England, the small holdings are not fenced in, but all commonage has been done away with, and doubtless the land is technically enclosed.

In Ireland they speak about striping the land, and the men

¹ *Bauernfrage und Agrarreform in Russland. Unter besonderer Berücksichtigung der nach dem Ukas vom 9. November 1906 und dem Gesetz vom 29. Mai 1911 eingeleiteten Auflösung des Mirs und Auseinandersetzung der bäuerlichen Landanteile*, by K. A. Wieth-Knudsen (Munich; Leipzig: Verlag von Duncker & Humblot, 1913, pp. 260).

² The word *mir* is generally used by English writers, but less correctly for a distinction must be made between the terms of "*mir*" (the world) and the "*obstchina*" (commune).

Mir means the representative (democratic republican) government of the village commune.

Commune (*obstchina*) means the village itself (including the government, *mir*, and every other feature of the village); it is a group of the peasant households (families) who own land commonly and cultivate it separately (by households).

who conduct the operation are called stripers, because the scattered holdings are consolidated into stripes or strips, but here again it is impossible generally to give one man one single, consolidated holding.

The German terms are far less liable to lead to misunderstanding than is the English word "enclosure." For example, *Zusammenlegung* means laying together, which is exactly what happens. *Auseinandersetzung und Verkoppelung* means separating and putting together, which is also what happens. In Bavaria, *Flurbereinigung* seems to be the commonly used legal term and the commission having the matter in charge is called *Flurbereinigungskommission*. This is expressive, as it means cleaning up the fields, bringing into order the separate pieces of land, but is less accurately descriptive than the term often used by Wieth-Knudsen, namely, *Auseinandersetzung und Verkoppelung*.

Dr. Wieth-Knudsen gives an illustration of the conditions in a village with the land still unenclosed, the farms consisting of widely scattered and intermingled strips, in his description of the village Pogost in government Kostroma. This is in Plan I, opposite page 82. Perhaps no better illustration could be afforded of the conditions preceding enclosure. Any one looking at this map may see how impossible any excellent agriculture must be under such conditions. In Plan II, opposite page 112, he shows the land of the same village after enclosure. It has not been possible to give every one a farm consisting of one single piece, although many have such farms. In a good many cases, it has been necessary to give to the single owner his farm in two pieces and, in some cases, three different pieces. In a few cases the home has been placed upon the farm, but the village still persists and as a rule the villagers go to their land to work.

There must be a certain pathos in this transformation to many Russians who had looked upon the *mir* as the great institution which was to save Russia from the pauperization and the proletarian disasters which threaten the rest of the civilized world. The *mir* as a small republic was teaching the Russian self-government, and thus, economically and politically, it was looked upon as a peculiar institution, which would prove to be the salvation of Russia. Alas! The *mir* is now disappearing and the cherished hopes which were entertained for it seem to be only utopian aspirations.

The story of the disappearance of the *mir* and of the consequent

transformation in Russian rural life with its effect upon urban development is a remarkable one. The economic evolution of Russia in its agrarian aspects is following the evolution of other countries which are in their economic life older, such as England, Ireland, and Germany. When we see how everywhere common holdings and common cultivation make way for individual holdings and separate private property in land, we are tempted to say that we have to do with natural laws, and can understand easily how this concept of natural laws has had so great an influence in economics; for the social laws with which we are here concerned seem to work almost with the precision of the laws of physics.

We have as a foundation the kind of world in which we live with the limitations of land supply, the natural facts of hunger and of the growth of population, resulting in scarcity of land, migrations of peoples, internal migrations, and emigrations of individuals and groups of individuals, and, finally, the necessities of increasing the yield from land, giving us certain stages in economic and social evolution.

Perhaps Russia is the most instructive of all countries for the student of land problems. Here we find a gigantic transformation, which began in the lifetime of those who do not like to call themselves old men, and which is proceeding on a gigantic scale, making what is going forward in a country like Ireland seem comparatively small. With the thought that we have in Russia something well worth while for the American economist, the present writer made a plan with a German economist to wander up and down the German and Russian frontier in East Prussia in August, 1914. Probably his proposed German comrade is as glad as he is that both were elsewhere at that time.

Dr. Wieth-Knudsen describes in broad outline the history of land tenure and of the peasant class in Russia up to 1913 from the time of the Great Emancipation of the serfs, based upon acts extending from 1858 to 1866, the principal one being the Act of 1861. The emancipation was only the first step in the land changes which have taken place in Russia. Freeing the serfs was a negative act. How were they going to live after freedom? Land was assigned to them, but the assignment was inadequate in extent. Moreover, the assigned land was held in the *mir*s with all the difficulties attending the cultivation of unenclosed fields made up of scattered strips. Again, the land assigned had to be paid for. Favorable conditions were made, the state assuming a great part

of the payments that had to be made to former proprietors and allowing the peasants to pay in instalments covering long periods. Finally came the epoch-making *ukas* of 1906, which was the beginning of the end of the *mir*. The *ukas* was based upon the principle of individual property and individual cultivation of the land. This was accompanied and followed by many measures designed to help the peasants to become successful, independent farmers. It is difficult to think of any measure, which has been suggested in this country, which has not been tried and is not now being tried in Russia. State credit has been abundantly used, and provision has been made for gradual repayments of state advances for land purchase over very long periods, for example, in many cases more than half a century. Great institutions have been formed and assisted by the state, especially peasant banks. Agricultural commissions have been created, and they have in all sorts of ways endeavored to help the farmers and to solve the pressing problems of land tenure. State lands have been made over to the peasants; lands of large proprietors, nobles and others have been bought in order to increase the peasant holdings which still remain too small, it being extremely difficult and in many cases impossible to approach the standard of the Irish economic holding, that is, a holding sufficient to support a family according to the approved standards of living of the farmer in that part of the world where his home is.

There is much dispute about the results achieved, but some things seem clear. As might be expected, we have a differentiation. On the one hand, we have a portion of the peasants forming a strong land-owning class of farmers. These peasants constitute an essential element in any healthy population, being a class economically independent. At the other extreme we have the peasants who have deteriorated economically and constitute the proletariat. Some of these, who could not secure sufficiently large farms or who fail in farming for one reason or another, have gone to the city, a desirable thing in itself and a necessary part of the industrialization of Russia.³ Still others have emigrated to Siberia, and many of them to their own advantage as well as to the advantage of Russia. But there is great discontent, and there have been upris-

³ For an interesting picture of "the new commercial middle-class Europeans being turned out at such an astonishing rate by modern industrialism of Russia," see Stephen Graham's new book, *The Way of Martha and the Way of Mary*.

ings of the peasants, because their conditions are so miserable and so different from the hopes they have been led to entertain.

Dr. Wieth-Knudsen, quoting Prince Obolensky (on page 187 of his work), shows that the *mir* still floats before the minds of the peasants as an ideal for the future. They want the nobles and the large landed proprietors to be deprived of their lands by confiscation and to have these added to the peasant holdings. Then they think of the *mir* as a place to which they can return when, because of age or otherwise, economic distress overtakes them. Some of them think of the *mir* in this way, as also some of them think of it as a proper organization of agriculture. Wieth-Knudsen clearly shows that in reactionary proposals, looking to the *mir* as a solution of land problems, there is no hope. It is necessary to go ahead and not backward, and as a remedy for industrial accidents, old age, etc., he suggests social insurance.

The difficulty is that a great economic change has taken place without corresponding human changes. The minds of the masses have not been adjusted to the transformation that is taking place. Education has been altogether inadequate, and preparation otherwise insufficient. What has been going on in Russia is in a part a passage from nature economy to money economy, but the peasants are not sufficiently accustomed to the use of money. The freedom they enjoy to sell their land results often in disaster, as it does in the case of the North American Indians who psychically are not equal to the new conditions. Sometimes the land is sold at very low figures and money characteristically disappears. At times the peasant owns only a small strip, and he receives for it only a very little money, which in many cases is soon lost or squandered. We witness, frequently, phenomena precisely similar to those which followed English land enclosures in the eighteenth century, a process altogether different from that of the grabbing of public lands in our country, although this is the picture too frequently called to mind when enclosures are spoken of.

It is apparent that in many cases certain restrictions upon the alienation of land are a necessary part of land reform. This appears to be the case in the most advanced countries, as well as in Russia. Our author calls attention to restrictions in Denmark, and also speaks about restrictions in France, the aim being in both cases to prevent an undue cutting up of the land into holdings insufficient to support a family. In America, when we speak of restrictions upon sales of land and land holdings, we generally have in mind

excessively large holdings, but in most parts of the world, the fear is rather of excessively small holdings. In Russia, also, there are restrictions upon mortgaging the land, which are found to be a necessary part of land reform. The peasant land, generally speaking, for example, can be mortgaged only when the money received is used for improvements. (See p. 184.)

The information we have about Russian land problems is too meager. Works like those by Simkhovitch and Mackenzie Wallace are too old to give present conditions. Some information is found in the article in the *Encyclopedia Britannica*, but it is quite inadequate. The magnum opus of Professor James Mavor on the *Economic History of Russia* may be consulted with profit, but the author does not seem to have succeeded so well in his discussion of Russian land problems as he has in the discussion of other questions. In addition to the work by Wieth-Knudsen, we have a still more recent German work by Preyer, called *Die russische Agrarreform*, which appeared in Jena in 1914, the work by Wieth-Knudsen appearing in 1913.

But the story is excellently told by Wieth-Knudsen in the work under consideration, the preface of which is dated March, 1913, and everything seems to have been at that time brought practically down to date. Wieth-Knudsen is in closer sympathy with the government than are most foreign writers on Russian affairs; and while the reviewer can not speak from personal observation, he is inclined to think from a comparative study that his description, while in its main outlines accurate, is somewhat too optimistic. No doubt a real upward movement has begun and, if the measures already taken are supplemented by other modern measures, including proper education, still more beneficent results will be achieved. Of course, the War has come and must disturb the progress of land reform in Russia, as it does interrupt social reform in all countries. The pity of it! Perhaps this review can not be better closed than by two quotations; the first, the observations upon reading this article of a scholar thoroughly versed in Russian affairs in which he himself has participated; and the second, one taken from Wieth-Knudsen, in which he tells us in broad outlines what he thinks about agrarian progress in Russia.

The first quotation reads as follows:

The non-Russian writers, especially Germans, are usually too optimistic about the recent peasant land reform in Russia. But, beside the reform itself, as such, many other reforms are necessary to make the land reform a success or, at least, less painful, for instance:

(a) The peasant farmer (who has separated his share of land into an individual farm, *i.e.*, privately owned by him) certainly needs more land than was his share in the commune;

(b) More general and more technical education is needed;

(c) More capital is needed in Russia to make the landless peasants workers in other industries;

(d) Such reforms, in turn, require changes in government; for instance, provincial autonomy is needed, so as to make the government elastic—to correspond to economic peculiarities in each province. The power of *zémstvo's* (a sort of provincial self-government in the central Russia) must certainly be increased.

In the second quotation, Wieth-Knudsen expresses himself as follows (page 180):

Every impartial person acquainted with the main purposes of the new Russian agrarian reforms, which have been described in the preceding chapters, would scarcely be able to escape the impression that we are here concerned not only with land reforms which have been planned and carried out in a large way, but that the Russian agrarian laws which have been passed since 1905, are without a parallel in the agrarian history of all countries, both in respect to their significance, so far as principle is concerned, and in respect to their practical execution. To be sure, the excellent effects of the present land reforms upon the farming of the Russian peasant will not at once manifest themselves, and their reaction upon the conditions of agricultural productions in other countries of the world may not be seen for a very long time. It means, however, a total failure to recognize the plain facts, as well as the teachings of land policy, if one denies that we are here concerned with a decided and far-reaching change for the better in Russian economic history, and that in consequence of this change for the better, especially as seen in the extension and still more the capacity of development of the Russian colossus, we are witnessing the first beginnings of a powerful movement of the center of gravity of the European economic system toward the East.

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DEPRECIATION RESERVES AS AFFECTED BY PROPERTY GROWTH

It is now almost universally recognized among producing industries that some regular provision should be made for replacement of equipment worn out in operation or superseded by more efficient or suitable types in the course of industrial and social development. In spite of this general recognition of depreciation the methods of providing for it are widely dissimilar. While in some cases renewals are not provided for until made, the prudent manager of a prosperous enterprise systematically builds up reserves far in advance of actual replacement requirements.

It is the purpose of this paper to show that certain methods of accumulating such reserves in common use, while economically sound under some conditions, fail to recognize a factor of varying but sometimes very great importance. The result of neglect of this factor may be that conscientious executives will accumulate excessive reserves, thereby depriving stockholders of the full returns to which they are entitled. While errors, if any, may have been more common in the opposite direction, giving larger returns to stockholders than really belonged to them, such errors have usually resulted from failure to analyze carefully the depreciation problem rather than from oversight of any of the important factors which properly enter into such analyses. In this discussion of the subject application will be limited largely to public utilities because their consistent and rapid growth makes them particularly good illustrations. The same reasoning is equally applicable to other industries which have similar characteristics.

Because of the comparatively short life and rapid development of the utility industry much of the equipment employed therein up to this time has had very limited usefulness. It is probable, however, that in the future there will be a closer agreement between natural life, determined by ordinary wear and decay, and useful life, which is fixed by all elements contributing toward ultimate replacement. It should therefore be possible in the future to make more definite provision for replacements from income with rates that are at the same time reasonable and sufficiently high to take care of this feature sometimes neglected in the past.

This past neglect has not all been ignorance or carelessness of operating officials or undue greed of investors. There were visions, now partially realized, of a vast development of business which

would permit liberal future provisions for depreciation with rates for service which were not exorbitant. If full provision had been required in the early years of the business when actual replacement expenditures required by ordinary wear and decay were small, rates for service would have been so high as to retard seriously or even prohibit the development of much needed public service.

The earliest definite step taken by the utilities in providing for depreciation, as in many other fields of activity, was the reservation of a portion of the annual net profit before dividends were declared. Such reservations were not definitely fixed but were increased or diminished with good or bad business conditions. If in a term of years the total reservation was sufficient, there remained the definite advantage of a comparatively stable return on the investment. As time went on, some utilities transferred their depreciation allowances from surplus to a distinct depreciation reserve definitely held for replacement requirements.

The procedure above described is open to the objection that it is indefinite and may not in the long run be adequate. There is always a temptation to distribute too liberal dividends, hoping for better business conditions in the future to build up the depreciation reserve. This objection may be met by maintaining a definite average during a term of years sufficiently long to include the usual cycle of good and bad business. This involves the necessity of determining what constitutes a suitable average annual depreciation reserve.

Some utilities which have carefully studied the subject have adopted a production basis as a standard, setting aside each year a certain amount per kilowatt hour, per car mile, per thousand feet of gas, etc. Other utilities have attempted to estimate the useful life of their property and have set aside each year a corresponding percentage of its value. Still others, not having had, perhaps, suitable inventories of their properties but recognizing a fairly definite relation between property value and gross earnings, have set aside each year a percentage of their gross for depreciation. This last method has the advantage of partial adjustment of the depreciation reserve to the prosperity of the business.

With the advent of regulation there has developed a demand on the part of the commissions for more definite and scientific bases for insuring adequate provisions for depreciation. This movement has culminated in a requirement of the Interstate Commerce Commission that all carriers under its jurisdiction shall set aside

every month during the life of certain prescribed elements of physical property or groups of similar elements hereafter acquired, a sum representing the total average reduction in value during that period. If an element has an estimated life of twenty years, each month must see $1/240$ of its value written off. Most of the state commissions, which have otherwise generally followed the accounting methods prescribed by the Interstate Commerce Commission, have not definitely adopted this method of depreciation accounting. They doubtless recognize that it can not be fully applied to previously acquired property and that it results in the accumulation of a large reserve that is never needed.

Until a property reaches a period when its elements have acquired uniformly distributed ages, the annual expenditures for replacements will not rise to the normal uniform point. Thereafter, they will average an approximately constant amount equal to the annual reserve set aside therefor. In the earlier years there will be an increasing total accumulation, rapid at first, but gradually diminishing in rate as short-life elements are replaced. The unused accumulation may approach or even exceed 50 per cent of the value of the property. This fund is contributed by the patrons of the utility and, without any restriction on its use, as is the case in interstate accounting, the free money represented thereby is usually invested in additions to the property. There is no logical reason why patrons should be required to furnish funds for physical additions to utility property without assurance of a definite return thereon. Their only return is through reduction in rates, so that without both close regulation and continued regular patronage their return will be less than might be obtained from an investment of their own choosing.

Without commission requirement few utilities would adopt the practice above described but would rather set aside, without interest accumulations, a percentage of gross or of investment which increasing experience shows would take care of replacements as and when necessary. Percentages of this kind as commonly used take into consideration the character and life expectancy of the particular property involved. It is not necessary to start a depreciation reserve during the earliest years of operation, as an accumulation started after say ten years, when the business has become comparatively stable, will be found sufficient for normal requirements. Most utilities did not start such reserves from their beginning and would now find any other basis than present value difficult or impossible of full application.

In so far as depreciation percentages are based upon the full value of the property at the present time (or gross earnings bearing a fairly definite relation thereto) they neglect a factor of very considerable importance, namely, the rate of growth of the property. Replacements are made today of elements placed in service say 20 years ago. Perhaps those elements comprised 1/20 of the property then in use, or 5 per cent. If the property has been growing, their value will be by no means 5 per cent of the value today. A property valued at \$1,000,000 today, if of steady growth at the rate of 6 per cent per year, was worth 20 years ago only \$312,000; and replacements amounting to 5 per cent of that value are less than 2 per cent of the value today. It is therefore readily seen that the rate of growth is a factor to be carefully considered in any provisions for depreciation based directly or indirectly on the present-day value of the property.

It is now proposed to analyze the effect of the rate of growth as carefully as possible, assuming certain average conditions, and to draw certain conclusions therefrom applicable to actual properties. The results are embodied in formulas which express the annual cost of replacements of worn out or obsolete property in terms of (1) the value of the property as a whole at the time of the inquiry, (2) the useful life of its depreciable elements, (3) the range of life if uniformity is lacking, in other words, the difference in useful years between the shortest and longest-lived elements, and (4) the rate at which the property has been increasing in value during the life of its existing elements. After these formulas have been developed the effect upon the annual cost of replacements of varying any of the factors involved is readily determined. Variations in the last-named factor, the rate of growth, constitute, as already stated, the particular field of the present investigation.

The analysis employed is a purely mathematical one and the various average and uniform conditions necessarily assumed are not actually found in any existing public utility. The fundamental assumptions with respect to the property are as follows:

1. A uniform rate of growth.
2. A uniformly distributed age of all depreciable elements.
3. A uniform useful life of all depreciable elements, or a range of life which is uniformly distributed with respect to both number and value of such elements.
4. An unlimited age of the property as a whole.

No one of these assumptions is fully met in any property. The

last is particularly lacking in applicability to public utilities comparatively few of which, with the exception of gas and water works, are over 30 years old. The extent of the error in connection with this last assumption will, however, be shown. Departures from uniformity in the other assumptions can not be definitely measured but their effect can to some extent be estimated. In spite of this, no claim is made for other than broad and general applicability of the method employed.

The analysis involves the tracing of each element or group of similar elements replaced in any year back to its date of installation and expressing the cost of its replacement as a percentage of the total present value of the property. The sum of such percentages for different elements or groups of different elements replaced during the year gives the total percentage of present value spent for replacements.

The method may be first illustrated by the very simple example of a property without growth, with all elements of uniform life and uniformly distributed age. Each year will see the replacement of one group of elements, the useful life of which has ended. If the useful life is 20 years, the cost of replacements each year will be $1/20$, or 5 per cent of the total value of the property.

If there is a range of life also uniformly distributed, of say 15 years, each year will see the replacement of 15 groups of elements, installed between 14 and 28 years previous. Each one of these groups represents $1/300$ of the total value of the property and as there are 15 groups the total annual cost of replacements remains $1/20$, or 5 per cent of the total property value.

Turning now to the more complicated case of a growing property, to which subsequent consideration is limited, a somewhat different treatment is found to be necessary. With an assumed uniform rate of growth from a time of zero value, and uniform life and uniformly distributed age of all elements, the replacements in any year may be divided into groups including, respectively, the elements which were new n years ago (n representing the years of useful life) and replaced for the first time, the elements which were new $2n$ years ago and replaced for the second time, the elements which were new $3n$ years ago and replaced for the third time, and so on until the value of the elements becomes negligible because of the constantly decreasing size of the property as it is traced farther and farther back. All replacements made in any year are included in some one of these groups.

With uniform rate of growth or increase in property value (which will be represented by i , a decimal) the relation between present value (V) and the value n years ago (v_1) may be expressed by the formula:

$$V = v_1 (1 + i)^n$$

The value of v_1 in this formula is

$$v_1 = \frac{V}{(1 + i)^n} \text{ or } V (1 + i)^{-n}$$

The value $2n$ years ago is similarly found to be:

$$v_2 = \frac{v_1}{(1 + i)^n} = \frac{V}{(1 + i)^{2n}}$$

Values of v_3, v_4, v_5 , etc., follow the same form, for example:

$$v_5 = \frac{V}{(1 + i)^{5n}}$$

Values of $(1 + i)^n$ and $\frac{1}{(1 + i)^n}$ may be found in published compound interest tables for ordinary ranges of both i and n .

The annual additions to property are i times the present value. If in any year all elements first installed n years ago are to be replaced, their value is $i \times v_1$; or $\frac{iV}{(1 + i)^n}$. If in addition there are to be replaced a second time elements installed $2n$ years ago, their value is similarly $i \times v_2$ or $\frac{iV}{(1 + i)^{2n}}$. The third replacement of elements installed $3n$ years ago will cost $\frac{iV}{(1 + i)^{3n}}$.

In a property of indefinite age with uniform life of all elements the total cost of replacements in a year in which the total value of the property is V will be the sum of the series of such members carried to the point of negligible value, or

$$C = iV \left(\frac{1}{(1 + i)^n} + \frac{1}{(1 + i)^{2n}} + \frac{1}{(1 + i)^{3n}} + \dots + 0 \right).$$

The percentage of the value V spent in replacements, which it is desired to determine, is

$$x = \frac{C}{V} = i \left\{ \frac{1}{(1 + i)^n} + \frac{1}{(1 + i)^{2n}} + \frac{1}{(1 + i)^{3n}} + \dots + 0 \right\}.$$

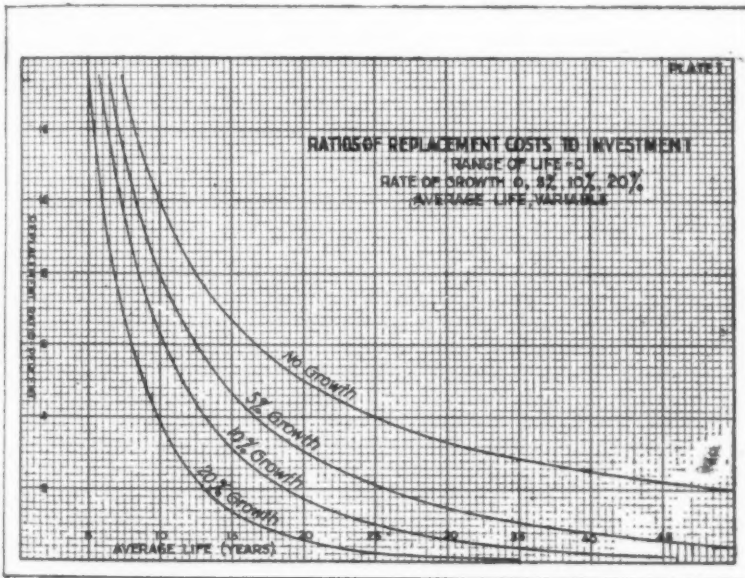
This formula applies to any rate of growth above zero, at which point it assumes an indefinite form, $0 \times \infty$. As already shown, when $i = 0$, $C = \frac{V}{n}$ and $x = \frac{C}{V} = \frac{1}{n}$.

As an example of the application of this formula the ratio of replacement cost to present value will be determined for a property

growing in value steadily at the rate of 5 per cent per year with a uniform life of all elements of 25 years. The value of $\frac{1}{(1+i)^n}$ when $i = 0.05$ and $n = 25$ is found from the tables to be 0.295, $\frac{1}{(1+i)^{24}}$, determined from tables or calculated is 0.087, $\frac{1}{(1+i)^{23}}$ is 0.025, etc. The sum of the complete series is 0.419. The ratio, x , is therefore found as follows:

$$x = i \times 0.419 = 0.05 \times 0.419 = 0.0209, \text{ or } 2.09 \text{ per cent.}$$

If n is varied through the range of life usually encountered in public service property, x may be determined for various values and corresponding points plotted on a curve representing a fixed 5 per cent value of i . Other values of i may then be selected and corresponding curves prepared. Such curves for several values of i , covering the range usually encountered in public service property, are shown in accompanying Plate I.



The curve of no growth shows values of x equal always to $\frac{1}{n}$. Thus for a 25-year life, $x = 4$ per cent; for $16\frac{2}{3}$ years, $x = 6$ per cent, etc. With a 10 per cent rate of growth, however, with a 25-year life, x is only 1 per cent, instead of 4 per cent with no

growth. The enormous effect of the rate of growth is at once apparent and the inconsistency of depreciation provisions depending only upon present value or revenue becomes clear.

Where there is both increase in value of property from year to year, and variation in useful life of the elements, the almost universal condition in public service properties, a definite expression of the annual cost of replacements is more complicated. It is most readily determined by assuming that the range of life is uniformly distributed over a certain number of years. If the range is r years, there will be r series of factors, similar in form to those described in the preceding section, in each of which the useful life will be different, ranging from the years of the shortest-lived group of elements to those of the longest-lived. The value of each group of elements is $\frac{1}{r}$ of the value of the groups previously considered where the useful life was uniform. But, as stated, there are r times as many groups entering into the total cost of replacements.

The complete formula expressing the percentage of present value annually spent for replacements, with uniform increase in value and uniformly distributed range of life of elements within assumed limits is as follows, n representing the average useful life.

$$\begin{aligned}
& \frac{1}{(1+i)^{n-\frac{r-1}{2}}} + \frac{1}{(1+i)^{2\left(n-\frac{r-1}{2}\right)}} + \frac{1}{(1+i)^{3\left(n-\frac{r-1}{2}\right)}} + \dots 0 \\
& + \frac{1}{(1+i)^{n-\frac{r-1}{2}+1}} + \frac{1}{(1+i)^{2\left(n-\frac{r-1}{2}+1\right)}} + \frac{1}{(1+i)^{3\left(n-\frac{r-1}{2}+1\right)}} + \dots 0 \\
& + \frac{1}{(1+i)^{n-\frac{r-1}{2}+2}} + \frac{1}{(1+i)^{2\left(n-\frac{r-1}{2}+2\right)}} + \frac{1}{(1+i)^{3\left(n-\frac{r-1}{2}+2\right)}} + \dots 0 \\
& + \frac{1}{(1+i)^{n-\frac{r-1}{2}+3}} + \frac{1}{(1+i)^{2\left(n-\frac{r-1}{2}+3\right)}} + \frac{1}{(1+i)^{3\left(n-\frac{r-1}{2}+3\right)}} + \dots 0 \\
& + \frac{1}{(1+i)^{n-\frac{r-1}{2}+4}} + \frac{1}{(1+i)^{2\left(n-\frac{r-1}{2}+4\right)}} + \frac{1}{(1+i)^{3\left(n-\frac{r-1}{2}+4\right)}} + \dots 0 \\
& + \frac{1}{(1+i)^{n-\frac{r-1}{2}+5}} + \frac{1}{(1+i)^{2\left(n-\frac{r-1}{2}+5\right)}} + \frac{1}{(1+i)^{3\left(n-\frac{r-1}{2}+5\right)}} + \dots 0 \\
& + \text{other series in a total of } r \text{ series, the last two being as follows:—} \\
& + \frac{1}{(1+i)^{n+\frac{r-1}{2}-1}} + \frac{1}{(1+i)^{2\left(n+\frac{r-1}{2}-1\right)}} + \frac{1}{(1+i)^{3\left(n+\frac{r-1}{2}-1\right)}} + \dots 0 \\
& + \frac{1}{(1+i)^{n+\frac{r-1}{2}}} + \frac{1}{(1+i)^{2\left(n+\frac{r-1}{2}\right)}} + \frac{1}{(1+i)^{3\left(n+\frac{r-1}{2}\right)}} + \dots 0
\end{aligned}$$

The calculation of all the factors in the above formula would be quite laborious as there may be several thousand under some conditions. Fortunately each of the r series is of the form $a + a^2 + a^3 + \dots 0$ which, when a is less than unity as in this case, is equal to $\frac{a}{1-a}$. The first member of each series, here represented by a , is taken directly from compound interest tables. The whole equation may therefore be reduced to the following simpler form:

$$i = \frac{i}{r} \left[\frac{1}{(1+i)^{n-\frac{r-1}{2}}} + \frac{1}{(1+i)^{n-\frac{r-1}{2}+1}} + \frac{1}{(1+i)^{n-\frac{r-1}{2}+2}} + \dots \frac{1}{(1+i)^{n+\frac{r-1}{2}}} \right]$$

$$\left[1 - \frac{1}{(1+i)^{n-\frac{r-1}{2}}} \right] \left[1 - \frac{1}{(1+i)^{n-\frac{r-1}{2}+1}} \right] \left[1 - \frac{1}{(1+i)^{n-\frac{r-1}{2}+2}} \right] \left[1 - \frac{1}{(1+i)^{n+\frac{r-1}{2}}} \right]$$

The commonly accessible compound interest tables, prepared for financial and engineering purposes, are not sufficiently comprehensive for extended depreciation calculations. Tables prepared for life insurance calculations should not be used as they are based on *advance* premium payments. For convenient use in connection with this subject complete new tables have been calculated to fully cover the range to be expected in depreciation problems.

Table A, appended, gives values of $\frac{1}{(1+i)^n}$ for useful values of i between 1 per cent and 15 per cent, and for similar values of n between 1 and 100 years. Although some intermediate values of both i and n are omitted, complete calculations are possible for the ordinary ranges encountered in public service property. For other or longer-lived kinds of property approximate calculations over a wider range are also possible. $\frac{1}{(1+i)^n}$ is simply the amount which, at the assumed rate of growth, will accumulate to unity in any number of years under consideration.

In calculations involving assumed unlimited age it is not a value of $\frac{1}{(1+i)^n}$ that is needed but the sum of an infinite series of which $\frac{1}{(1+i)^n}$ is the first member, the form of this series being, as already stated, $a + a^2 + a^3 + \dots = 0$. Table B has, therefore, been calculated for the same ranges as Table A, showing the sums of the infinite series of which the values of $\frac{1}{(1+i)^n}$ in Table A are the first members. With this table the calculation of depreciation ratios becomes very simple. As both these tables were calculated mechanically, exact accuracy is not assured, but possible errors are less than would arise from other approximations and assumptions necessary in working out any practical problem to which the tables are applicable.

The actual working out of an example will assist in making the procedure clear. The example will be to find the percentage of present value spent annually for replacements in the case of a property growing at the rate of 6 per cent per year, with an average life of elements of 20 years and a range of life of these elements of 15 years. With the range assumed the shortest-lived elements

are replaced after 13 years and the longest-lived after 27 years.

The value of $\frac{1}{(1+i)^n - \frac{r-1}{2}}$ when $i = 0.06$, $n = 20$ and $r = 15$, be-

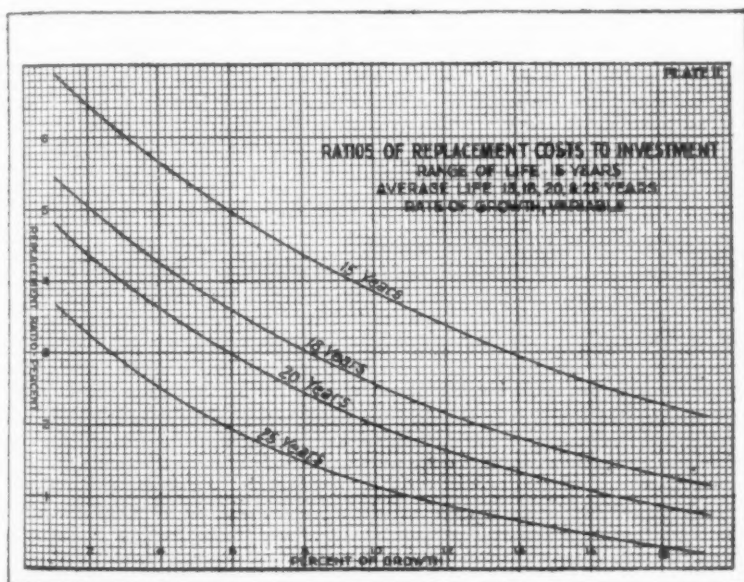
comes $\frac{1}{(1+i)^{13}}$ and is found in Table A to be 0.469. The sum

of the series of which this is the first member is $\frac{0.469}{1 - 0.469}$, which from Table B is found to be 0.883. In the final series, in which

$\frac{1}{(1+i)^n + \frac{r-1}{2}} = \frac{1}{(1+i)^{27}}$, the first member is found to be 0.208 and the sum of the series 0.262. Without tracing the determination of the 13 intermediate series the sum of all 15 series may be found by adding directly from the 6 per cent column in Table B (years 13 to 27 inclusive) to be 7.455. From this sum the value of x is determined as follows:

$$x = \frac{4}{n} \times 7.455 = \frac{.08}{15} 7.455 = .0298, \text{ or } 2.98 \text{ per cent.}$$

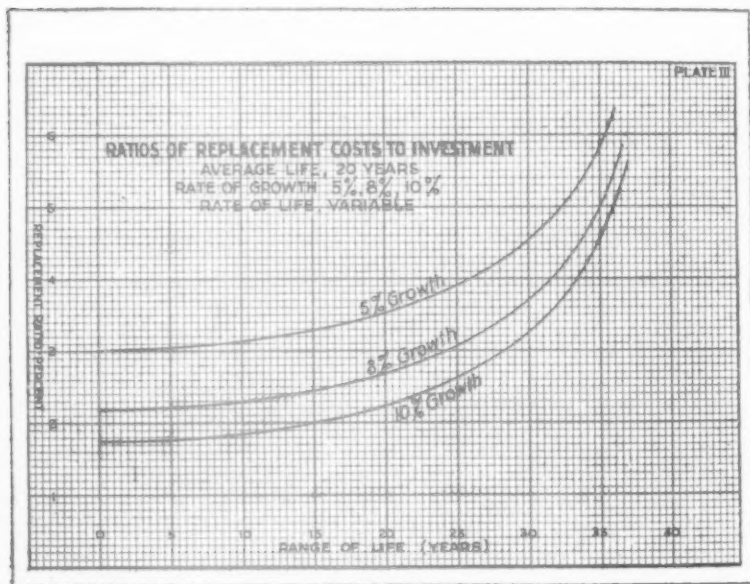
If the rate of growth, i , in the above example is changed, other factors remaining the same, a series of values of x may be obtained and plotted in a curve. Changing also the values of n , other curves representing various average useful lives may be obtained. Several of these are shown in Plate II. An examination of these



curves shows again the very marked effect of growth of a property upon the relation between replacement costs and total property value. With a 20-year average life and a 10 per cent annual growth, the ratio is only 2 per cent instead of about 5 per cent with no growth. A ratio of 1 per cent is found for a rate of growth of $16\frac{2}{3}$ per cent per year.

It will be noticed on Plate II that the curves are not plotted through to points of zero growth. If extended they would not show exactly the ratio values which might be expected. In the case of the 20-year life and no growth above referred to the ratio would not be exactly 5 per cent. This is due to the 15-year range of life which is assumed in all these curves.

It will be of interest to study the effect of changes in range of life upon the replacement ratio. This may be done by changing the values of r in the general formula, other factors being kept constant. Plate III shows the results with several different rates



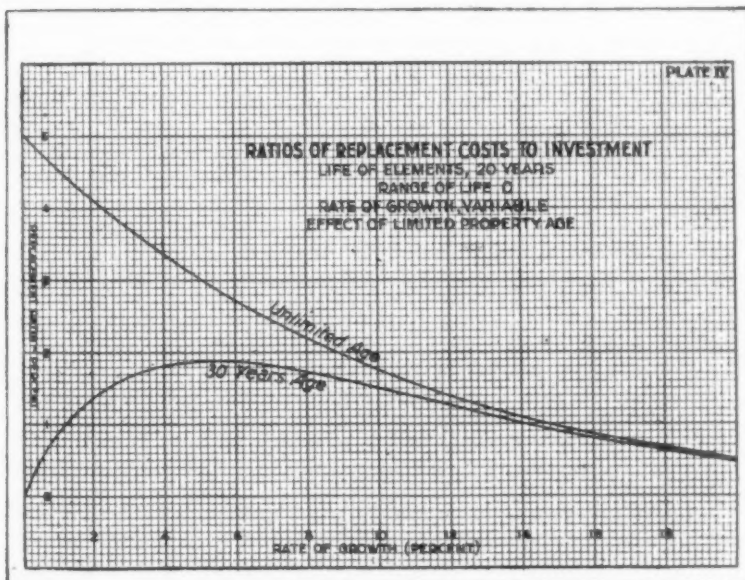
Rate of Life in title should read Range of Life.

of growth, the average life in all cases being the same. It appears that within moderate limits variations in the life of different elements, which do not affect the average life of all, change the replacement ratio comparatively little, but when there is a very

wide range, involving very frequent replacement of certain elements, the replacement ratio increases quite rapidly. With an average life of 20 years and a range of life of 35 years certain elements have a life of only 3 years ($20 - \frac{35-1}{2}$) and replacement of such elements at this short interval is necessary. By the use of Plate III curves the useful range of Table II may be considerably extended.

It was stated at the beginning of this discussion that some of the assumptions necessary to a mathematical analysis were not met in actual properties and that with respect to age they were not approximated. An unlimited age was assumed, whereas actual life has been comparatively short. It is possible to show, approximately at least, the extent of the error involved when the age of the property is limited as suggested to 30 years. This is done by cutting off in the general replacement ratio formula all members in each series which involve new elements or replaced elements which had their origin more than thirty years back. The condensed form of the general formula cannot be used in this study as individual members in each series are required.

Plate IV shows a general ratio curve of a property having a uni-



form life of all elements of 20 years, and an unlimited age. There is plotted below this the curve of a property similar except as to its age, which is limited to 30 years. It appears that properties which have grown faster than 10 per cent per year show a small departure from the theoretical or unlimited replacement ratio. At 8 per cent growth the discrepancy is slightly more than 20 per cent and with less growth it increases rapidly. In all cases the actual ratio is less than the theoretical. The zero percentage of replacement at zero growth shown by the 30-year age curve, while theoretically true for uniform 20-year life, would not actually be found in any practical cases. If a property less than 30 years old is considered, the discrepancy from the condition of unlimited age is increased to the extent of the increase in number of elements which have not reached the limit of usefulness within the assumed period.

It has been stated herein that departure from uniformity in other factors than that referred to above could not be definitely measured. While this is true with respect to irregular variations in general, the effect of certain departures can be measured. Referring to the general formula it is seen that the uniform rate of growth (i) appears uniformly in all members and can not be varied. The same is true of average life (n) and range of life (r). However, the assumption is made that the values represented in all series are the same; in other words, that the short-life elements have values equal to the long-life elements. It is probable that in the long run there is greater and more consistent departure in practice from this assumption than from those of uniform growth and constant average life.

In the case of a property growing at the rate of 10 per cent, with an average life of elements of 20 years, it is found from Plate II that the replacement ratio for a uniformly distributed range of life of 15 years is 2 per cent. If instead of assigning equal values to each of the 15 different life groups, represented by the 15 series in the formula, different values are selected, the replacement ratio can still be calculated although with some increased labor.

A sample calculation has been made assuming that the shorter life groups of elements represent less than $\frac{1}{15}$ of the total value and the longer life groups correspondingly more than $\frac{1}{15}$. This is the condition commonly found in public service property, partly because of the greater permanence naturally attached to the more expensive units and partly because the renewals of short-life units

are charged to operating expense and do not burden the depreciation reserve. The latter is not, however, a valid consideration in a strictly theoretical analysis.

Assuming the value of the longest life group of elements as 50 per cent greater than the average and the shortest life group 50 per cent less and arranging a uniform variation between these extremes, the total value not being changed, the replacement ratio is found to be 1.71 per cent, or about 14 per cent less than with uniformly distributed values. It is not necessary in these calculations to assume any uniform relation between the values in the different groups, and the complication of calculation is not materially increased by any desired arbitrary distribution of total value. For such use of the general formula its form should be changed to the following, in which negative exponents have also been employed for further general simplification:

$$z=i \left\{ p_1 \frac{(1+i)^{-\left(n-\frac{r-1}{2}\right)}}{1-(1+i)^{-\left(n-\frac{r-1}{2}\right)}} + p_2 \frac{(1+i)^{-\left(n-\frac{r-1}{2}+1\right)}}{1-(1+i)^{-\left(n-\frac{r-1}{2}+1\right)}} + \right. \\ \left. p_3 \frac{(1+i)^{-\left(n-\frac{r-1}{2}+2\right)}}{1-(1+i)^{-\left(n-\frac{r-1}{2}+2\right)}} + \cdots p_r \frac{(1+i)^{-\left(n+\frac{r-1}{2}\right)}}{1-(1+i)^{-\left(n+\frac{r-1}{2}\right)}} \right\}$$

In the above form $p_1, p_2, p_3, \dots, p_r$ are the percentages of total value of the property belonging in the r different life groups. Calculations based upon actual distribution of value, if this is determinable in any case, would generally show ratios, as in the example given, less than the theoretical ratio. The general statement may therefore be made that a depreciation reserve set up in accordance with the unmodified general formula will liberally provide for all ordinary replacement requirements.

One factor touched upon herein needs further consideration. There are three kinds of expenditures made upon physical property to maintain indefinitely its usefulness: (1) those which merely insure safe and efficient current operation; (2) those which have a tendency to prolong useful life; (3) those required to replace by equivalent units those elements of the property which have outlived their usefulness. In common accounting practice the first two classes of expenditures are charged to operating expense although the second tends to reduce replacement costs which are included in the third class. The third class includes all ex-

penditures for entire replacement of units including those for which advance provision in the form of a depreciation reserve is necessary. Not all expenditures of this class are ordinarily handled through a depreciation reserve. It is common practice to charge renewals of minor, short-life elements direct to operating expense. A railway company will handle ties, poles, trolley wire and perhaps rail, special work and other miscellaneous items in this way. Other classes of utilities have similar but less extensive charges. All such companies have real estate which is not depreciable, also working capital, supplies, etc., included in their appraisals, and possibly some overhead charges which are not recurrent in connection with renewals.

An analysis of typical appraisals of utility property shows that the elements which do not require consideration in depreciation accounting amount to about 25 per cent of the total value of an average composite property. Street railways alone have a higher percentage, electric light and gas companies lower percentages.

It therefore appears that in applying the replacement ratios herein determined to property values to find the sum to be set aside annually for depreciation, the value V should be 25 per cent or some other specifically determined percentage less than the total investment. In one of the illustrations used herein a replacement ratio of 2.0 per cent was found. If applied to the whole investment, instead of to only the depreciable portion not accounted for in operating expense, this ratio is reduced to about 1.5 per cent. If applied for any reason to capitalization it might be still further reduced.

It will be of interest in conclusion to compare the procedure determined by the foregoing analysis with the actual handling of depreciation requirements in the case of a particular public utility. This company, in common with many of its kind, has been in the habit of reserving each year before declaring dividends a portion of its profit (after providing for operating expenses, taxes, and interest charges) amounting to approximately 10 per cent of its gross earnings, less bond sinking fund requirements. The company has added to its physical property at the rate of 6 per cent per year. The appraised value of the entire property is only four times the annual gross, the business being well developed.

If the average useful life of the depreciable property is 20 years and the range of this life is 15 years, we find from Plate II that the corresponding replacement ratio is very close to 3 per cent. If 25

per cent of the property included in the inventory requires no replacement or is taken care of in operating expenses, there remains 75 per cent of the 3 per cent, or $2\frac{1}{4}$ per cent of the appraised value to be used annually for replacements or set aside in a depreciation reserve. If the total appraised value is four times the gross, the percentage of gross which should be reserved is $4 \times 2\frac{1}{4}$ per cent, or 9 per cent. It appears, therefore, that the 10 per cent habitually reserved is 11 per cent in excess of actual average requirements.

A somewhat less favorable case may now be considered, namely, a property with the same physical characteristics as above but growing only at the rate of 2 per cent per year and having gross earnings only $\frac{1}{5}$ the value of its physical property. The full replacement ratio is found from Plate II to be 4.36 per cent. If this is an electric light and power property the percentage of value excluded from the depreciation provisions may be only 20 per cent, leaving 80 per cent of 4.36 per cent, or 3.49 per cent as the corrected replacement ratio. With total investment five times the gross, the ratio of replacement cost to gross is 5×3.49 per cent, or 17.5 per cent. If this company followed the practice of setting aside 10 per cent of its gross before paying dividends, its reserve would in the long run be entirely inadequate. If it has so far escaped embarrassment it may be attributed to its youth or to the fact that it still retains, perhaps with questionable economy, much of its original equipment theoretically beyond the useful age.

The effect of salvage from abandoned elements has so far not been mentioned. It may amount to 10 per cent or more of the original cost of the elements or may in other cases be negligible. By assuming that *V* as used herein is the "wearing value" instead of total cost any desired allowance for salvage may be made.

One more problem of a somewhat different form will be outlined, involving the determination of the proper ratio of annual replacement reserve to property value and gross earnings. An assumed street railway property now has gross earnings of \$650,000 per year. Ten years ago it was earning only \$250,000. Its rapid development has necessitated the early abandonment of substantial parts of its equipment so that the average life of the whole is not over 18 years. The range of life is probably not far from 15 years.

The mean rate of growth during the 10 years is determined from Table A by finding the per cent column to which the growth

factor lies nearest in the ten-year line. The growth factor is $\frac{250,000}{650,000} = 0.385$ and is almost exactly at the 10 year, 10 per cent point in Table A. Assuming a 10 per cent rate of growth, the replacement ratio is found on the 18-year curve, Plate II, to be 2.56 per cent. With 30 per cent of the total value not provided for in the depreciation reserve the net ratio becomes 1.79 per cent. This calculation assumes that the property value has increased at the same rate as the gross earnings. This is not usually the case on account of possible increase in saturation of the investment as business develops. In this assumed case, however, an unusual amount of unproductive expenditures for paving and other civic improvements has tended to keep the ratio nearly constant. A constant ratio of investment to gross of 4.75 is assumed, making a ratio of replacement cost to earnings of $1.79 \times 4.75 = 8.5$ per cent. So long as the assumed conditions obtain, this company should set aside not less than $8\frac{1}{2}$ per cent of its annual gross, less any sinking or improvement fund provisions, for present or future replacements of property. Without the rapid growth which this company has enjoyed the ratios obtained would be materially higher and would involve a serious burden because of the comparatively low gross yield from the investment.

It is not within the scope of this paper to discuss the physical and engineering problems arising in depreciation studies. One reference to this phase of the subject can not, however, be omitted without leaving a possibly magnified impression of the effect of growth upon depreciation reserves. It has been shown that rapid increase in property value from year to year permits a very large reduction in per cent of total value required for replacement, other things being equal. But some of these other things do not remain equal. Rapid growth usually involves outgrown and otherwise inadequate equipment and consequent shorter average life than is found with more conservative development. A shorter average life means a higher replacement ratio. Therefore its effect is to counteract to some extent that resulting from rapid growth. Under ordinary conditions the influence of growth should largely predominate so that it can not properly be neglected.

While there is every reason to expect continued substantial growth in all fields of utility activity, we have now reached a stage in development which will permit more systematic provision for depreciation. It is now universally recognized that utility patrons and not investors should carry this burden, and with increasingly

developed business they can do so without hardship. If as a basis of determining what this burden shall be, utilities are permitted and choose to use total investment, or present earnings, kilowatt hours, car miles, etc., derived therefrom, the foregoing discussion may be of assistance in determining suitable percentages or factors. It is not applicable to cases in which reserves are started for each element or group of similar elements at the time of installation, based on their actual cost or their depreciable value.

It should at least be clear that a particular utility desiring to establish a suitable depreciation reserve should not adopt a certain percentage of its gross, or a certain amount per car mile operated or per kilowatt hour generated because some other utility rendering similar service has found by experience that these figures produce adequate provision for replacements as required. Not only may the properties have different characteristics affecting useful life, but also the communities served may be so diverse in progressiveness and expansion that radically different expenditures may be required by the utilities to keep pace with the general development. Such factors should therefore be carefully considered in determining depreciation reserves and the practice of other utilities should not be adopted without assurance of similarity in physical property and development history. Each case should preferably be considered in the light of its own particular characteristics, with due recognition of the factors discussed herein.

L. R. NASH.

TABLE A.—Compound Interest Table.

Amounts which, compounded annually, will accumulate to unity in various years at certain rates.

Years	1%	2%	3%	4%	5%	6%	7%	8%	10%	15%
1	.990	.980	.971	.962	.952	.943	.935	.926	.909	.870
2	.980	.961	.943	.925	.907	.890	.874	.857	.826	.756
3	.971	.942	.915	.889	.864	.840	.816	.794	.751	.658
4	.961	.924	.888	.855	.823	.792	.763	.735	.683	.572
5	.951	.906	.863	.822	.784	.747	.713	.681	.621	.497
6	.942	.888	.837	.790	.746	.705	.666	.630	.565	.432
7	.933	.871	.813	.760	.711	.665	.623	.584	.513	.376
8	.923	.854	.789	.731	.677	.628	.582	.540	.467	.327
9	.914	.837	.766	.703	.645	.592	.544	.500	.424	.284
10	.905	.820	.744	.676	.614	.559	.508	.463	.386	.247
11	.896	.804	.722	.650	.585	.527	.475	.429	.351	.215
12	.887	.789	.701	.625	.557	.497	.444	.397	.319	.187
13	.878	.773	.681	.601	.531	.469	.415	.368	.290	.163
14	.870	.758	.661	.578	.505	.443	.388	.341	.263	.141
15	.861	.743	.642	.555	.481	.418	.363	.315	.239	.123
16	.853	.728	.623	.534	.458	.394	.339	.292	.218	.107
17	.844	.714	.605	.513	.436	.372	.317	.270	.198	.093
18	.836	.700	.587	.494	.416	.351	.296	.250	.180	.081
19	.828	.686	.570	.475	.396	.331	.277	.232	.164	.070
20	.819	.673	.554	.456	.377	.312	.258	.215	.149	.061
21	.811	.660	.538	.439	.359	.294	.242	.199	.135	.053
22	.803	.647	.522	.422	.342	.278	.226	.184	.123	.048
23	.795	.634	.507	.406	.326	.262	.211	.170	.112	.040
24	.787	.622	.492	.390	.310	.247	.197	.158	.102	.035
25	.780	.610	.478	.375	.295	.233	.184	.146	.092	.030
26	.772	.598	.464	.361	.281	.220	.172	.135	.084	.026
27	.764	.586	.450	.347	.268	.208	.161	.125	.076	.023
28	.757	.574	.437	.334	.255	.196	.150	.116	.069	.020
29	.749	.563	.424	.321	.243	.185	.141	.107	.063	.017
30	.742	.552	.412	.308	.231	.174	.131	.099	.057	.015
31	.734	.541	.400	.297	.220	.164	.123	.092	.052	.013
32	.727	.531	.388	.285	.210	.155	.115	.085	.048	.011
33	.720	.520	.377	.274	.200	.146	.107	.079	.043	.010
34	.713	.510	.366	.264	.190	.138	.100	.073	.039	.009
35	.706	.500	.355	.254	.181	.130	.094	.068	.036	.008
36	.699	.490	.345	.244	.173	.123	.088	.063	.033	.007
37	.692	.481	.335	.234	.164	.116	.082	.058	.030	.006
38	.685	.471	.325	.225	.157	.109	.076	.054	.027	.005
39	.678	.462	.316	.217	.149	.103	.071	.050	.024	.004
40	.672	.453	.307	.208	.142	.097	.067	.046	.022	.004
42	.658	.435	.289	.193	.129	.087	.058	.040	.018	.003
44	.645	.418	.272	.178	.117	.077	.051	.034	.015	.002
45	.639	.410	.264	.171	.111	.073	.048	.031	.014	.002
46	.633	.402	.257	.165	.106	.069	.044	.029	.013	.002
48	.620	.387	.242	.152	.096	.061	.039	.025	.010	.001
50	.608	.372	.228	.141	.087	.054	.034	.021	.009	.001
60	.550	.305	.170	.095	.054	.030	.017	.010	.003	. . .
70	.498	.250	.126	.064	.032	.017	.009	.005	.001	. . .
75	.474	.227	.109	.053	.025	.013	.006	.003	.001	. . .
80	.451	.205	.094	.043	.020	.009	.004	.002	.001	. . .
90	.408	.169	.070	.029	.012	.005	.002	.001	. . .	. . .
100	.370	.138	.052	.020	.008	.003	.001	. . .	. . .	. . .

TABLE B.—Sums of Infinite Series.

This table contains the sums of the infinite series, the first members of which are the figures in Table A for the corresponding years and percentages.

Yrs.	1%	2%	3%	4%	5%	6%	7%	8%	10%	15%
1	100.000	50.000	33.333	25.000	20.000	16.667	14.286	12.500	10.000	6.667
2	49.761	24.773	16.422	12.263	9.753	8.091	6.905	6.007	4.760	3.100
3	33.014	16.360	10.779	8.001	6.342	5.234	4.447	3.850	3.021	1.920
4	24.704	12.140	7.960	5.890	4.640	3.810	3.219	2.773	2.155	1.335
5	19.618	9.616	6.273	4.615	3.619	2.957	2.486	2.131	1.638	0.988
6	16.272	7.921	5.150	3.769	2.940	2.390	1.998	1.704	1.296	.762
7	13.881	6.727	4.350	3.165	2.457	1.986	1.651	1.401	1.054	.602
8	12.038	5.825	3.746	2.713	2.095	1.685	1.393	1.175	0.874	.486
9	10.655	5.127	3.280	2.362	1.814	1.461	1.193	1.001	.736	.397
10	9.537	4.568	2.906	2.083	1.591	1.265	1.034	0.863	.628	.329
11	8.625	4.110	2.601	1.854	1.408	1.114	0.905	.751	.540	.274
12	7.865	3.728	2.348	1.664	1.257	0.988	.799	.659	.468	.230
13	7.224	3.405	2.134	1.504	1.130	.883	.710	.582	.408	.194
14	6.674	3.129	1.951	1.367	1.021	.794	.634	.516	.358	.165
15	6.199	2.888	1.792	1.249	0.927	.717	.569	.460	.315	.140
16	5.784	2.681	1.653	1.145	.846	.650	.513	.412	.278	.120
17	5.419	2.499	1.532	1.055	.774	.591	.464	.371	.247	.103
18	5.090	2.336	1.424	0.975	.711	.540	.420	.334	.219	.088
19	4.797	2.189	1.327	.904	.655	.494	.382	.302	.196	.076
20	4.534	2.058	1.240	.840	.605	.454	.348	.273	.175	.065
21	4.296	1.939	1.163	.782	.560	.417	.318	.248	.156	.056
22	4.081	1.830	1.092	.730	.519	.384	.292	.226	.140	.048
23	3.882	1.734	1.027	.683	.483	.355	.267	.205	.126	.042
24	3.702	1.643	0.968	.640	.450	.328	.246	.187	.113	.036
25	3.535	1.561	.914	.600	.419	.304	.226	.171	.102	.031
26	3.382	1.485	.864	.564	.391	.282	.208	.156	.092	.027
27	3.241	1.415	.819	.531	.366	.262	.192	.143	.083	.024
28	3.108	1.350	.777	.500	.342	.244	.177	.131	.075	.020
29	2.986	1.289	.737	.472	.321	.227	.163	.120	.067	.017
30	2.872	1.233	.701	.446	.301	.211	.151	.110	.061	.015
31	2.766	1.180	.667	.421	.283	.199	.140	.101	.055	.013
32	2.664	1.130	.635	.399	.266	.183	.130	.094	.050	.011
33	2.570	1.084	.605	.378	.250	.171	.120	.086	.045	.010
34	2.482	1.041	.577	.358	.235	.160	.111	.079	.041	.009
35	2.400	1.000	.551	.340	.221	.150	.103	.073	.037	.008
36	2.319	0.962	.527	.322	.209	.140	.096	.067	.034	.007
37	2.245	.925	.504	.306	.197	.131	.089	.062	.030	.006
38	2.175	.891	.482	.291	.186	.123	.083	.057	.027	.005
39	2.108	.859	.461	.277	.175	.115	.077	.052	.025	.004
40	2.044	.828	.442	.263	.166	.108	.072	.048	.023	.004
42	1.927	.771	.406	.239	.148	.095	.062	.041	.019	.003
44	1.818	.719	.374	.217	.132	.083	.054	.035	.015	.002
45	1.770	.695	.360	.207	.125	.078	.050	.032	.014	.002
46	1.722	.673	.345	.197	.118	.074	.046	.030	.013	.002
48	1.632	.630	.319	.180	.105	.065	.040	.026	.011	.001
50	1.550	.591	.296	.164	.095	.057	.035	.022	.009	.001
60	1.224	.439	.204	.105	.057	.031	.018	.010	.003	. . .
70	0.993	.334	.145	.069	.033	.017	.009	.005	.001	. . .
75	.900	.293	.122	.056	.026	.013	.006	.003	.001	. . .
80	.822	.258	.104	.045	.020	.009	.004	.002	.001	. . .
90	.690	.208	.075	.030	.012	.005	.002	.001	. . .	. . .
100	.586	.160	.055	.020	.008	.003	.001	. . .	. . .	. . .

REVIEWS AND NEW BOOKS

General Works, Theory and Its History

NEW BOOKS

- CAHN, H. *Capital to-day. A study of recent economic development.* (New York: Putnam. 1915. Pp. x, 313. \$1.50.)
- DAY, E. E. and DAVIS, J. S. *Questions on the principles of economics.* (New York: Macmillan. 1915. Pp. 141.)
- HAYES, E. C. *Introduction to the study of sociology.* (New York: Appleton. 1915. Pp. xviii, 718. \$2.50.)
To be reviewed.
- HECKER, J. F. *Russian sociology. A contribution to the history of sociological thought and theory.* Columbia University studies in history, economics and public law, vol. LXVII, no. 1. (New York: Longmans. 1915. Pp. 309. \$2.50.)
To be reviewed.
- INGRAM, J. K. *A history of political economy.* New and enlarged edition. (London: A. & C. Black. 1915. Pp. xix, 315. 7s. 6d.)
- KELLER, A. G. *Societal evolution. A study of the evolutionary basis of the science of society.* (New York: Macmillan. 1915. Pp. xi, 338. \$1.50.)
"On a number of counts, the natural scientist is fairly an object of envy to the social scientist," Professor Keller begins. The natural scientist deals with concrete materials. The social scientist does not, particularly because of a tendency to follow Spencer rather than Darwin in evolutionary thought. Some criticism is leveled at the follower of Spencer for attempting to apply great principles which, like the formulas of evolution, transcend a too literal application. To such broad principles Darwin's definite picture of variation, selection, transmission, and adaptation is a contrast. Professor Keller, in a series of chapters, "applies" the latter to the study of society. With acknowledgments to Sumner as well as Darwin, he has written an exceedingly interesting book. The application of Darwin, however, lacks some of the inductive efforts which make Darwin so convincing and Spencer so plausible.
F. A. DEWEY.
- KUMPMANN, K. *Friedrich List als Prophet des neuen Deutschlands.* (Tübingen: Mohr. 1915. Pp. 52.)
- LAUGHLIN, J. L. *The elements of political economy, with some applications to questions of the day.* Revised edition. (New York: Am. Bk. Co. 1915. Pp. xxx, 386, illus. \$1.20.)
- MACIVER, R. M. *Community. A social study, being an attempt to set out the nature and fundamental laws of social life.* (New York: Macmillan. 1915.)
- MORE, P. E. *Aristocracy and justice.* Shelburne essays, ninth series. (Boston: Houghton Mifflin. 1915. Pp. x, 243. \$1.25.)
Includes an essay on Property and Law.

OBERFOHREN, E. *Die Idee der Universalökonomie in der wirtschaftswissenschaftlichen Literatur bis auf Turgot.* (Jena: Fischer. 1915. Pp. vi, 204. 7.50 M.)

TAUSSIG, F. W. *Inventors and money-makers. Lectures on some relations between economics and psychology delivered at Brown University in connection with the celebration of the 150th anniversary of the foundation of the university.* (New York: Macmillan. 1915. Pp. ix, 138. \$1.)

Economic History and Geography

The Critical Period. 1763-1765. Edited with introduction and notes by CLARENCE WALWORTH ALVORD and CLARENCE EDWIN CARTER. Collections of the Illinois State Historical Library, Vol. X. British Series, Vol. 1. (Springfield, Ill.: Illinois State Historical Library. 1915. Pp. 57, 597.)

The value of the material in this series is not that it is entirely new. Some of the documents have been published elsewhere. But there are here assembled from widely scattered places practically all the known sources of Illinois history during the British period. Many of the copies made by Professor Carter from the manuscripts stored in the capitol at Albany have peculiar value now, as the originals were destroyed by the fire.

This volume deals with the efforts of the British to take over the ceded western territory. Military matters and relations with the Indians thus occupy chief place. More of economic interest will be found in the rest of the series which will include collections illustrating such matters as the business activities of Philadelphia firms in Illinois, operations of land speculators, and the life of the French people along the Mississippi. But even this war-burdened first volume contains allusions to the fur trade, the population and resources of Illinois, attempts to clear the Iberville river, the cost of land-carriage, methods of land-jobbers with the Indians, paper currency, etc.

Some interesting material on the fur trade is found in the last part of the document by Sir William Johnson, commenting on the organization of the Indian Department (pp. 336-342). This part, Article 43, is omitted from the paper as published in the New York Colonial Documents (7:661). It deals with the state of the Indian trade, and among other things contains a quaint schedule of "goods proper for the Indian Market" with the prices in New York currency and in sterling. Another schedule for use in bartering appears later on, showing what each article was worth in peltries

(pp. 402-404). The original exists in Sir William's handwriting, and is here published for the first time. Information regarding the great increase in the export of furs from New Orleans after the cession of Canada, appears in reports from the governor of Louisiana and the governor of West Florida (pp. 209, 439).

Some light is thrown on monetary conditions in the interior at this time. A Jesuit father quotes the high prices in New Orleans to justify the estates maintained by the order (p. 95). Paper money was in circulation. Colonel Bradstreet abolished it in the region where he commanded (p. 345). The bad conditions prevailing in New Orleans because of the old paper money, *billets*, are set forth by Governor Dabbadie to the Ministry at home (p. 318), and his successor, Aubry, in 1765 describes the utter demoralization in the colony due to the confusion in finances; he adds, "It is time, my lord, that the Spaniards arrive" (p. 436). Bills on New York were at an exorbitant premium in Mobile (p. 465).

The care with which this material has been grouped into chapters, thoroughly indexed, and illuminated by a special introduction and footnotes, makes it an admirable example of scholarly editing.

AMELIA CLEWLEY FORD.

Milwaukee-Downer College.

The Financial Administration of the Colony of Virginia. By PERCY SCOTT FLIPPIN. Johns Hopkins University Studies in Historical and Political Science, Series XXXIII, No. 2. (Baltimore: The Johns Hopkins Press. 1915. Pp. 95.)

This monograph is another product of the movement to rewrite American colonial history from the imperial point of view and from official papers in the English Public Record Office. The book will be welcomed by students of Virginian history because it describes clearly, though quite summarily, the financial administrators of colonial Virginia. One lays down the volume with a more definite understanding of how the finances of Virginia were managed than is derived from Bruce's treatment of the subject for a briefer period in his *Institutional History*, II, 522-604. The author is concerned primarily with about fifteen classes of officials—how appointed, their functions in theory and practice, and their remunerations. In the eighteenth century there were about twenty royal officers occupied with royal revenues and about one hundred and fifty provincial officials. Those from England were generally obscure office seekers and appear to have been less faithful

to the public service than the provincial officials, among whom were a few able men. Functions were needlessly duplicated, unless there was some virtue in a system of checks. While salaries were not large, fees were exorbitant. Treasurers, like John Robinson, were in the habit of loaning government funds in their keeping and appropriating the profits. A receiver-general in the eighteenth century served on an average about fourteen years and, with a salary of £800 plus fees, the position must have been lucrative. Some offices were purchasable, *e.g.*, inspectorships of tobacco. The postal system was regarded as a means of obtaining revenue; rates were excessive and much mail traveled privately to evade postal "duties." The influence of great English merchants on appointments to service in Virginia and on the management of finances is touched upon. The part they played as "bankers" for colonial officials and planters in the credit operations of the period deserves the attention of historians of the colonies. In this connection Dr. Flippin points out the influence of Micaiah Perry and Company in the sixteenth century and of J. and C. Hanbury and the African Company in the eighteenth. Companies of such standing secured limitations of the issue of paper money and prompt repeals of colonial acts that discriminated in favor of Virginian owned ships.

The study is quite free from errors of fact or judgment. However, the statement (p. 67) that British merchants were influential in having the Townshend duties passed is supported only by an inference from a letter of Botetourt. The unjust estimate of Virginia's contribution to the French War, which is attributed to Mr. Beer (p. 77), is simply Mr. Beer's paraphrase of a letter of Loudoun (*British Colonial Policy 1754-1756*, pp. 58-59). It is stated (pp. vii, 83) that discontent in the colony usually can be traced to interference with its economic and financial affairs. But too little attention is paid, even after 1760, to just what this interference was and how it affected Virginia. Taxation itself, as distinct from "financial administration," is too briefly treated (pp. 9-21) in a work of this character. However, the study is offered only as a forerunner of a larger treatise on Royal Government in Virginia.

FRANK W. PITMAN.

Yale University.

The Canadian Commonwealth. By AGNES C. LAUT. Problems of the Nations, edited by PAUL LELAND HAWORTH. (Indianapolis: The Bobbs-Merrill Company. 1915. Pp. 343. \$1.50.)

The first part of this book is a description and analysis of the growth of a feeling of national consciousness in Canada. Then follows a discussion of various problems which are matters of moment in the Dominion today. The immigration question is considered and the influx of Americans and English. More space is devoted to the immigrants from eastern Europe, from India, and the Orient. Canada has succeeded for the time in excluding the Hindus and in limiting the number of arrivals from China and Japan, but in spite of this it is still a question what the outcome will be and whether the assimilation of eastern Europeans is possible or probable.

The closing chapters are devoted to various industrial and transportation problems, a description of the form of government, the question of defense, and an account of the great north land. Canadians, and particularly western Canadians, do not seem to realize the importance of the Panama Canal. They are much more interested in the Hudson Bay route and have little doubt as to its success. Miss Laut does not think that there is a labor problem in Canada, partly because opportunities for promotion are so numerous that the working man is not in the hopeless position of his fellow-worker in other and older countries and partly because a substantial though relatively diminishing proportion of the population is composed of farmers who own their land.

The book treats of things as they ought to be rather than as they are and Miss Laut looks at her subject through the rosy spectacles of the Western real estate dealer or the typical politician. Nevertheless, it must be acknowledged that the average Canadian sees things as she sees them and is equally confident that all is well. For such people valuable antidotes to the unreasoning optimism of this volume may be found in Preston's *Life and Times of Lord Strathcona* and Myers' *History of Canadian Wealth*.

To give a few illustrations of what I have in mind: Miss Laut has an explanation of "Why Big Business has never dominated government in Canada"; whereas it would be difficult to find a country whose government is more subservient to the manufacturers, the banks, and the transportation companies. Again, "They [Canadians] regard government as a grave and sacred function, not as a grab bag for spoils." And this from one who ought to know how in Canada "industry leans on the government," as Edward Porritt has it. Does she know anything about the Canadian Department of Public Works and its unsavory record? And yet again, "There has been no weak-kneed mob bellowing

for pap from the breasts of a state treasury." This sentence in itself is typical of the book both as to fact and style. As to fact, I need mention only the activities of the Canadian Manufacturers' Association and the Canadian Northern Railway as instances to the contrary.

So also, "During the last ten years she [Canada] has drawn . . . almost two million Americans." To substantiate this statement, mention is made of a census of 1914, whatever that may mean. The statement is ridiculous and Canadians should have learned from the disappointing returns of the census of 1911 that our immigration figures, as a basis for estimating an increase in population, are thoroughly unreliable. We learn also that "Canada can build ships as cheaply as any country in the world." Comment is unnecessary. There is found throughout the book much unreasoning and futile comparison of areas in Canada with areas of similar size in Europe, with little or no recognition of the fact that very substantial parts of Canada are uninhabited and uninhabitable.

A very sane and moderate account of the natural resources of Canada has recently been written by Dr. F. D. Adams for the Conservation Commission. This and the yearly reports of the commission are greatly to be preferred to such publications as *The Canadian Commonwealth*.

J. C. HEMMEON,

McGill University, Montreal.

An Introduction to the Economic History of England. I. The Middle Ages. By E. LIPSON. (London: A. & C. Black, Ltd. 1915. Pp. viii, 552. 7s. 6d.)

Mr. Lipson has produced a work of exceptional importance for the teacher and student of English economic history, one which in many of its parts will have to be taken account of also by the specialist in the field. The volume before us covers the period from earliest times to the reign of Elizabeth and treats of the following subjects: the origin of the manor, the manor and the open field system, the break-up of the manor, the agrarian revolution, the growth of towns, fairs and markets, the gild merchant, craft guilds, the woollen industry, foreign trade, and revenue and exchequer. It closes with an appendix of authorities and a fairly good index. Though the first chapter, on the origin of the manor, and the last, on revenue and the exchequer, are mainly compilations, the re-

maining chapters, in varying degrees, are based not only on authoritative monographic literature but also on the rapidly accumulating texts which have been appearing from time to time at the expense of the British government or of local British historical societies in their transactions and proceedings. Nothing better has been written on medieval English towns, fairs, markets, and guilds than is to be found in this history, and though Professor Ashley's admirable volumes possess an insight and attractiveness that will enable them to hold their place for many years to come, the greater comprehensiveness, thoroughness, and accuracy of Mr. Lipson's work and the wealth of illustration and reference with which it abounds will cause it to take precedence of the older history in many of the subjects treated. It is of quite a different character from the recent compilations of Allsopp, Inness, and Tickner.

Not only is the work based on careful investigation, but also it is written from the standpoint of the modern historical scholar. Mr. Lipson makes it clear that he has no other object to further than the ascertainment of the truth and that he will be satisfied with no other source of information than the one which will tell the truth most convincingly. He declares that it is seldom safe to regard medieval legislation as an index to anything more certain than the intentions and aspirations of the lawmaker; that new statutes were very slow in changing the life of the local communities; and that the promulgation of a law rarely marked a new departure in actual economic custom and practice. Consequently, he places little faith in the medieval law book and statute book as sources of history and goes directly to the local evidence itself. He demonstrates conclusively that "the apparently dry and insignificant details gleaned from records and charters, civil pleadings and inquisitions, form the material out of which is built the living story" of the growth of English agriculture, industry, and commerce. In this respect he does what Green aimed to accomplish with insufficient knowledge—to describe the life of the humbler folk among the people of England. His method is an advance on that of Dr. Cunningham, who depended largely on statute and pamphlet, and is more in accord with that of the writers for the *Victoria History of the Counties of England*, from the chapters of which on social and economic life he has gleaned many of the facts which he has woven into his own story.

In this attempt to get as near as possible to the actual life of

the English local communities in the period from the twelfth to the sixteenth centuries, Mr. Lipson has reached two general conclusions, which though not new as matters of belief are new as comprehensively demonstrated statements. In the first place, he shows that medieval life was nowhere uniform, and that large generalizations need to be qualified at every turn; and, in the second place, that English medieval rural society was not stationary but progressive, and that any view to the contrary is misleading and untrue to fact. The evidence upon which these conclusions are based constitutes the very fibre of his work.

In lesser matters also he is equally enlightening and suggestive. As has already been said, the best chapters are those that relate to towns, fairs, markets, and guilds, and in these, as in fact in all, he has accompanied his evidence with admirable summaries that lend themselves to quotation and comment. The English medieval towns, he says, were characterized by "cohesion, self-dependency, and the jealous isolation of the various municipal units," but among the burgesses there seems to have been "a genuine sense of solidarity, a coöperation of social and economic forces for the common welfare which made the English borough of the Middle Ages a storehouse of political ideas and a valuable school for political training." Though gildship, like parliamentary representation, was not a privilege but a burden involving heavy responsibilities, the gild enactments embodied "professions of good faith and regard for the common profit that were not devoid of real meaning." Though the commercial relations of the time "were not international but ultra-municipal, and each town presented to its neighbors the same impenetrable front that modern nations nowadays exhibit towards each other," the situation represents but "one stage of social evolution to another, from the city state to the country state," and discloses the early history of the industrial protective policy which gradually crystallized in the famous mercantile system, an extension from a civic to a national practice.

The disappearance of the gild merchant in the fourteenth century was due, Mr. Lipson believes, to the rapid development of the craft guilds "among which the powers of the merchant gild were parcelled out," a process due, not to legislation but to the operation of economic forces. In like manner the craft guilds themselves were transformed, not as the result of the acts of 1437 and 1504, upon which Mr. Lipson places a new interpretation, or as a consequence of the legislation of the Reformation period, but by the inevitably

disintegrating effects of changing economic conditions, the separation of the functions of production and distribution, and the gradual emergence of the domestic system. One of the most important of Mr. Lipson's conclusions concerns the place of capital in the medieval economy. Capitalist manufacturers, he finds, existed in considerable numbers before the middle of the fifteenth century, the date assigned by Professor Ashley, and capital as an agricultural and industrial factor played a much larger part in medieval life than has usually been supposed. Usury laws, he thinks, rather retarded than aided the economic development of the Middle Ages.

A few of his minor points may be noted. The word "blanket" appears one hundred and twenty years before the date given in the Oxford dictionary. The gilds were the founders and maintainers of many grammar schools and so stand among the forerunners of our modern educational system. Women in the Middle Ages were not merely "unpaid domestic workers" but wage-earners as well, supplying a market and sharing in the industrial life of the country. The industrial conflict between town and country is older than the sixteenth century. Weaving and the working up of English cloth is older than the immigration of the Flemish artisans, and English merchants competed with aliens and engaged in a foreign carrying trade at an earlier date and to a greater extent than older writers were wont to believe. Other conclusions, equally interesting, might be cited, but enough has been said to show the value of Mr. Lipson's book and to demonstrate how important it is that the publication of local historical material should be continued as rapidly as possible.

CHARLES M. ANDREWS.

Yale University.

The Evolution of the English Corn Market from the Twelfth to the Eighteenth Century. By NORMAN SCOTT BRIEN GRAS. Harvard Economic Studies, Vol. XIII. Awarded the David A. Wells prize for the year 1912-1913. (Cambridge: Harvard University Press. 1915. Pp. xiii, 498. \$2.50.)

The commercial organization of one of England's basic industries is here subjected to intense, genetic study. The corn trade technique is shown to have developed from intermanorial relations which gradually resolved themselves into a territorial marketing system; the rapid growth of London in population and trade forced a reorganization into the metropolitan consumption stage

and, later, into the metropolitan export stage. These transitions are proven by price statistics from 1208 to 1700. On the basis of these price data the manorial, territorial, municipal, and central statutory trade policy with respect to the corn trade, internal, coastwise, and export, in both normal and abnormal times, is interpreted, and the rise of middlemen in numbers, function, and public favor is traced. Thus the backbone of the book is the assembling and interpretation of the prices of five centuries.

Previous authors have interpreted the corn trade from the too narrow statutory viewpoint alone. Professor Gras gets behind legislation and makes the actual conditions of the corn trade explain the legislative program. This shift of viewpoint is the greatest contribution of the author. It is a study, like that of Professor Usher's for France, of the origins, development, and internal transformations in the trade itself. These two works present a new phase of attack in economic history; and, if future studies prove as fruitful, the innovators deserve high credit.

The author's work in price statistics has been exhaustive and careful. Besides using Rogers', Eden's, and Houghton's collections of prices, he has contributed large collections for the period 1208-1259, the half-century before Rogers' and finds there was a considerable rise in prices during the thirteenth century, contrary to the expressed opinions of Rogers, Palgrave, and Jacob; he has supplemented Rogers' entries from 1259 to 1300 with prices from Winchester bishopric; and has added prices for London during the sixteenth century. By distributing the price entries on the basis of natural trade and production areas he has greatly enhanced the value of the statistical method, increasing the validity of averages and showing shifts in price differentiation within districts and among districts and the effect of the metropolis. The only similar statistical method was that used by Rogers with the prices for the short period 1692-1703 and by Arthur Young later.

Following the lead of Professor Gay and Mr. Lutz, the author has been very critical and suspicious of Rogers' statistical methods and conclusions; he is shown to be inconsistent, and his averages faulty and conclusions often unwarranted. These three Harvard critics have severely shaken confidence in this too generally accepted writer. One fact is thus strongly brought out, *viz.*, that price statistics are likely to be a precarious basis from which to draw conclusions; only the closest consistent scrutiny of price sources and statistical methods, coupled with voluminous price

entries, can make them at all conclusive data. The number of variant conditions attached to each price is so great that one finishes reading a page of conclusions based upon such data with a warrantable question in his mind as to whether they are trustworthy.

Professor Gras substitutes the concept of "metropolitan economy" for Schmoller's "national economy" as the historical successor of the "town economy." This is an important proposition. The rise of London to dominance in the corn trade organization presents an historical reality fitting von Thünen's theorizing about *Der isolirte Staat*. The initial suggestion comes from Young; Gras perfects the idea. Even the statutory corn policy is shown to be dictated by the needs and ambitions of London. As the problems of marketing are gaining increasing attention of late among economists, producers, and legislators, this insistence upon the "metropolitan economy" may be very opportune.

Objection is taken by the author to the position held by Ashley, Cheney, Prothero, Cunningham, and others, wherein they assert the self-sufficiency of the manor and neglect the group idea. Manorial isolation is found to be the exception, not the rule. Tested by statistics of exports, imports, coast and overland trade, the opinions of Gay and Ashley that the inclosures resulted in a decrease in the volume of corn produced are, according to Gras, wrong; and the explanations of the Tudor agrarian policy resting on this error (*e.g.*, those of Cunningham, Schantz, Faber, *et al.*) are defective.

In view of the numerous obstacles which confront one investigating the early internal trade, especially over a long period of time—dearth of data, indirect reference of data, changes in and promiscuous use of trade nomenclature, local peculiarities, etc., the author is to be congratulated for his excellent rendering of a very difficult essay.

RAY B. WESTERFIELD.

Yale University.

NEW BOOKS

- BILLIARD, R. *La Belgique industrielle et commerciale de demain.* (Paris: Berger-Levrault. 1915. Pp. xxii, 276. 4 fr.)
- BOSSE, E. *Norwegens Volkswirtschaft vom Ausgang der Hansaperiode bis zur Gegenwart.* (Jena: Fisher. 1915.)
- BRANDT, O. *Die deutsche Industrie im Kriege 1914-1915.* (Berlin: Heymann. 1915. Pp. 263. 5 M.)

BRIGGS, M. *Economic history*. (London: University Tutorial Press. 1915. Pp. vi, 508.)

CLAPP, E. J. *Economic aspects of the war: neutral rights, belligerent claims and American commerce in the years 1914-1915*. (New Haven: Yale Univ. Press. 1915. Pp. xiv, 340. \$1.50.)

Questions of international law are given prominence. The extent as well as the economic consequences of British interference with American trade are exaggerated, and much of the criticism directed against Great Britain has a modicum of validity only because that country deferred placing many articles upon its list of contraband during the first year of war.

O. M. W. S.

DRACHMANN, P. *The industrial development and commercial policies of the three Scandinavian countries*. (New York: Oxford Univ. Press, American Branch. 1915. Pp. 130. \$1.50.)

EGGENSCHWYLER, W. *Die Schweizer Volkswirtschaft am Scheideweg. Ratschläge zur Neu-Orientierung unserer Industrie*. (Zürich: Orell Füßli. 1915. Pp. 80.)

FISH, C. R. *American diplomacy*. (New York: Holt. 1915. Pp. xi, 541, maps. \$2.75; students' edition, \$2.25.)

This is the fifth volume in the American Historical Series, edited by Professor C. H. Haskins. "It is not presented," says the author in his preface, "as a contribution to knowledge but rather as a condensation of ascertained conclusions." For students of economics the interest of the book lies in the emphasis given to economic factors and in the description of the economic background of many of the diplomatic questions. Among the chapters that recognize these factors is chapter 6, which discusses the failure of the new government to negotiate a commercial treaty with Great Britain at the time that independence was recognized or directly afterwards. The position of the West in the adjustment of the delicate issues that were left unsettled by the treaty of peace with Great Britain is brought out in the next chapter. A good account of American commerce from 1803 to 1807 is given in the chapter on the Embargo, though it is made to appear (p. 156) that foreign interference with our trade began with the English Order in Council of May 16, 1806, and Napoleon's decree of the following November, no mention being made of the British order of June, 1803, or of the French decree of January, 1806.

Commerce again is allotted an important role in the determination of various diplomatic questions regarding the Mississippi and St. Lawrence rivers, the Great Lakes, the Northwestern boundary, and Texas. An obvious slip occurs (p. 197) when the "completion of canals . . . from Lake Erie to the *Erie Canal*" is said to have diminished the importance of the St. Lawrence problem. In the annexation of Texas the interests of slavery are noticed, but nothing is said of cotton, paper money, or the Texas debt. The Oregon settlement is credited to the missionary movement on the one hand and a desire to make land titles secure on the other. The importance of

cotton during the Civil War, and of the tobacco interests in Cuba—sugar is not mentioned—in precipitating the Spanish War, is recognized. Nor is a lighter touch lacking—the narrative is cheered and illuminated at times by apt questions from the *Biglow Papers*, Mr. Dooley, and other non-historical sources. As presented by Professor Fish the history of American diplomacy is both instructive and readable.

E. L. BOGART.

FOSTER, W. *The English factories in India*. Vol. IX. 1651-54. (New York: Oxford Univ. Press, American Branch. 1915. Pp. 364. \$4.15.)

FULLER, G. P. *An introduction to the history of Connecticut as a manufacturing state*. Smith College studies in history, vol. I, no. 1. (Northampton, Mass.: Smith College Dept. Hist. 1915. Pp. 64.)

GOODRICH, A. P. and others. *Problems of readjustment after the war*. (New York: Appleton. 1915. \$1.)

GRAY, H. L. *English field systems*. (Cambridge, Mass.: Harvard University. 1915. Pp. 568. \$2.75.)

HENRY, H. M. *The police control of the slave in South Carolina*. A dissertation submitted to the faculty of Vanderbilt University in partial fulfilment of the requirements for the degree of doctor of philosophy. (Emory, Virginia: H. M. Henry. 1914. Pp. x, 216.)

Although the chapters are so planned as to deal with various phases of police control, the author does not hesitate to include in his book much about the social, religious, and economic life of the slaves. No complaint can be made of these wanderings beyond the strict bounds set by the title, for the whole subject is well conceived. The author has made an industrious, intelligent, and unprejudiced study. Particularly commendable is the dispassionate way in which many matters of ancient controversy are discussed. The book is generally clear, but sometimes tedious; and it often lacks the graces of good composition.

The chapters cover such topics as legal status, overseers, the patrol, punishments, trials, trading with the slaves, hiring one's time, the slave trade, runaways, harboring runaways, the seamen acts, negro gatherings, insurrections, incendiary literature, the prohibition of instruction, manumission, and free negroes. Original sources are used freely. No index is included, a serious defect in a book whose chief use will be to serve as a source of information for students.

For the most part the book is free from generalizations, yet two facts may clearly be inferred from the discussion: (a) slave laws were apt to be harsh, but they were frequently tempered in the execution. That they were still harsh after being tempered is, unhappily, true of some of the laws. (b) In that kind of control in which the master's personality counted for much, and this was a large field, the treatment accorded the slaves reflected the master's individual nature, whether kind, wise, indifferent, or cruel. It was the task of the slaveowners to secure a satisfactory amount of labor from a

race which throughout its past has not been accustomed to steady or even moderately intelligent service. Out of the sum of their efforts, acting privately or as lawmakers arose the control of the slaves.

JOHN S. BASSETT.

Smith College.

HERRICK, C. A. *Outlines of economic history*. (New York: Macmillan. 1915.)

HIRST, F. W. *The political economy of war*. (New York: Dutton. 1915. Pp. xii, 327. \$2.)

The title of this book by the editor of the *Economist* is too pretentious, since it is mainly concerned with the cost of war. A general summary account of the growth of the public debts of various countries is the backbone of the discussion. This is preceded by a rather superficial account of the European wars of the eighteenth and nineteenth centuries, a rather lurid though perhaps not exaggerated account of the activities of armament firms, and the generally accepted reasons for holding that war expenditure, so far as possible, should be met from taxation rather than from loans. Short final chapters contain a few scattered observations on some of the financial experiences of the first year of the present war. The book is too extreme in many of its statements to be a very effective bit of peace propaganda.

O. M. W. S.

KESSLER, O. *Das deutsche Belgien. Beiträge zur Geschichte, zur Volkswirtschaft und zur deutschen Verwaltung*. (Berlin: Siegmund. 1915. 3 M.)

LAWSON, W. R. *British war finance, 1914-1915*. (New York: Van Nostrand. 1915. Pp. vi, 367. \$2.)

The author of this book, a London journalist, is obviously much dissatisfied with many of the economic and financial measures of the British government during the first year of the war. Although it is not stated that the various chapters first appeared as newspaper articles, they bear every earmark of that kind of writing and consequently do not make a very satisfactory book. Owing to the assumption that the reader is familiar with details of current events, proper enough in newspaper discussion, the book does not contain a sufficient narrative of the measures which were adopted. Analysis also is curtailed owing to the inveterate journalistic failing of making points forcibly at all costs. In short, the book is valuable mainly from the light it throws upon one section of British public opinion during the early months of the war.

O. M. W. S.

LE MOY, A. *Les cahiers de doléances d'Angers pour les états généraux de 1789*. Vol. I. (Paris: Leroux. 1915. Pp. cclxv, 418.)

MARTENS, A. H. & Co. *Canada as a field of investment and enterprise*. (Toronto: A. H. Martens & Co. 1915. Pp. 67.)

MATTHAI, J. *Village government in British India*. London School of Economics. Studies in economics and political science, no. 48. (London: Unwin. 1915. Pp. xix, 211. 4s. 6d.)

Supplementing the account of village structure in Baden-Powell, this book gives an excellent description of the administrative workings of the group, with regard to such matters as education, poor relief, sanitation, public works, police and justice.

MOORE, M. F. *The lands of the Scottish kings in England*. London School of Economics. Studies in economics and political science, no. 43. (London: Unwin & Allen. 1915. Pp. xii, 141. 5s.)

A careful account, particular rather than general in character, of the course of two groups of scattered manors in the twelfth and thirteenth centuries.

POHLE, L. *Die deutsche Volkswirtschaft und Kriegszustände*. (Leipzig: Deichert. 1915.)

PRANGE, O. *Deutschlands Volkswirtschaft nach dem Kriege*. (Berlin: Puttkammer & Mühlbrecht. 1915. Pp. 170.)

ROBINSON, A. G. *Cuba old and new*. (New York: Longmans. 1915. \$1.75.)

There are chapters on the natural features and economic resources of Cuba.

ROLFE, F. *Commercial geography of southern California*. (Los Angeles: Biola Press. 1915. Pp. 63. 50c.)

SABIN, E. L. *Gold seekers of '49*. (Philadelphia: Lippincott. 1915. Pp. 335, illus. \$1.25.)

SALMON, L. M. *The Dutch West India company on the Hudson*. (Poughkeepsie, N. Y.: L. M. Salmon. 1915. Pp. 51. 50c.)

SEGRE, A. *Manuale di storia del commercio*. I. *Della origini alla rivoluzione francese*. II. *Delle rivoluzioni francese ai giorni nostri 1789-1913*. (Torino: Lattes. 1915. Pp. 459; 513.)

SOMBART, W. *The quintessence of capitalism. A study of the history and psychology of the modern business man*. Translated and edited by M. EPSTEIN. (New York: Dutton. 1915. Pp. 400. \$5.)

Werner Sombart's *Der Bourgeois* (see vol. IV, p. 886 of this REVIEW) has been translated and edited with the above title. The editor has omitted chapter 1 of the original, *Der Geist im Wirtschaftsleben*, which seems unfortunate, and also the index of authors. He has condensed some of the examples cited by Sombart and has left out others; in both cases there is probably no real loss. In various ways space is saved so that the English book, although equally bulky, contains only 400 pages in contrast with 540 of the original. The translation is free and deviates greatly from Sombart's style, but wherever tested it brings out the full meaning. A few notes have been added and some material from the notes in the German has been incorporated into the text. Except for the omission of the first chapter, the English book is thoroughly satisfactory and probably more readable than the original. Mr. Epstein, because of his knowledge of the subject and his enthusiasm for Sombart's work, is an admirable editor and translator.

D. C. M.

SUMNER, W. G. *The challenge of facts and other essays*. Edited by A. G. KELLER. (New Haven: Yale Univ. Press. 1914. Pp. xii, 450. \$2.25.)

The chief question that has recurred to the reviewer in perusing this handsomely printed volume is, What was the use! For does not every one know what Professor Sumner's views were? To ask busy people of today to read old editorials on old issues seems a misconception of the economy of publishing. The editor has delved with great industry into the forgotten—obscure reviews and newspaper clippings and unpublished fragments, the very date of which can not in some cases be guessed at.

Sumner himself said: "I have spent an immense amount of work on it [social science] which has been lost because misdirected. The only merit I can claim in that respect is that I have corrected my own mistakes. I have not published them for others to correct." The editor says that he is convinced that "Sumner later changed his position as to certain points." By what right then, are these early and unpublished fragments dug up? The only serious purpose that they can serve, beyond placing at the disposal of the many former students of Sumner an interesting collection of his well-known views, is as source material to some future historian of the evolution of social philosophy in America. Perhaps the most striking testimonial of the greatness of Sumner's personality is the fact that he was able to carry over, impressively, the hard and fast ideals of the Old Individualism into the era of governmental responsibility in social matters and of concerted coöperation of social groups for common ends.

A. B. WOLFE.

TAKENOB, Y. *The Japan year book. Complete cyclopaedia of general information and statistics on Japan and Japanese territories for the year*. Tenth annual publication. (London: Japan Year Book Office. 1915. Pp. 802. 8s.)

TAYLOR, G. *Australia; its physiographic and economic aspects*. Revised edition. (New York: Oxford Univ. Press, American Branch. 1915. Pp. 256. 90c.)

TAYLOR, R. G. *Outlines of American industrial history*. (Manhattan, Kan.: Kansas State Agricultural College. 1915. Pp. 91. 25c.)

TICKNER, F. W. *A social and industrial history of England*. (New York: Longmans. 1915. Pp. 721. \$1.)

VOGEL, W. *Geschichte der deutschen Seeschifffahrt*. Vol. I. *Von der Urzeit bis zum Ende des 15. Jahrhunderts*. (Berlin: Georg Reimer. 1915. Pp. 560. 15 M.)

WOLTERS, F. *Geschichte der brandenburgischen Finanzen in der Zeit von 1640-1697. Darstellung und Akten*. Vol. II. *Die Zentralverwaltung des Heeres und der Steuern*. (Leipzig: Duncker & Humblot. 1915. Pp. 599. 20 M.)

YOUNG, J. T. *The new American government and its work*. (New York: Macmillan. 1915. Pp. xi, 663. \$2.25.)

Contains chapters on the powers of Congress relating to taxation and taxes; the limitation of commerce; the Sherman act; trade regulations and the Clayton act; federal police power; interstate commerce; the national conservation policy; business protection and regulation by the state; relation of the state to labor, health, charities and corrections, highways, and finances.

Check list of annual reports and other current publications issued by or under the authority of the state of New Jersey. (Trenton, N. J.: John P. Dullard, State Librarian. July 1, 1915. Pp. 12.)

Commerce of Rhode Island, 1726-1800. Vol. II. 1775-1800. (Boston: Mass. Hist. Soc. 1915. Pp. 501.)

To be reviewed.

British India. With notes on Ceylon, Afghanistan, and Tibet. Special consular reports, no. 72. By H. D. BAKER and others. (Washington: Bureau of Foreign and Domestic Commerce. 1915. Pp. 638.)

A list of books on the history of industry and industrial arts. Prepared by A. G. S. JOSEPHSON. (Chicago: The John Crerar Library. January, 1915. Pp. 486. 50c.)

Not a bibliography, but a list of the histories of industry in the John Crerar Library.

The Merchant's Association of New York year book: 1915. (New York: Merchants' Assoc. 1915. Pp. 240.)

The new declaration of independence; or The downfall of financial slavery, explaining in detail the complete mastery of the money power by the common people and the regaining of American independence and permanent prosperity, as provided for in the platform of the national capital and labor party. (Fresno, Cal.: Herald Print. 1915. Pp. 40. \$1.)

Agriculture, Mining, Forestry, and Fisheries

Early Economic Conditions and the Development of Agriculture in Minnesota. By EDWARD VAN DYKE ROBINSON. (Minneapolis: University of Minnesota. 1915. Pp. v, 306. \$1.50.)

Patient research is required in the collection of materials for the historical treatment of the economics of agriculture in this country, although for only one state. The information is often hidden in obscure places and is scattered throughout publications of a wide diversity of contents. This volume makes the beginning of an agricultural history within state limits which should be extended to other states, and the author's performance is so scholarly and thorough that it may be regarded as a model of plan and arrangement of details.

The treatment begins with the physical data of agriculture and with the meteorology of the state, both of which are fundamental

to the subject and must ultimately determine the agricultural results in large degree. Following an account of the early explorations, is a narrative of the permanent settlements and of the development of pioneer agriculture, ending, for statistical convenience, with 1860. One-crop farming soon followed and this was devoted to wheat because of suitability to the climate, the fertility of the virgin soil, the agricultural machinery adapted to this crop, the facilities of transportation, and the mechanism of marketing, all of which made this a large cash crop, easily produced and sold.

About 1870 mixed farming began to appear, with diversification of markets and the observed advantages of a more varied and independent production on each farm. This tendency was not discredited, but only temporarily arrested by the reaction towards wheat farming in the last decade of the nineteenth century, after which agricultural changes and diversification were resumed and continued along inevitable lines. It must appear to one who studies agriculture historically that it has successive phases, varying in details according to natural environment and artificial conditions, but fundamentally constant in each phase. The author of this volume clearly indicates the steps taken by agriculture in Minnesota from its primitive simple form to the much more elaborate components of recent years, with diversification and rotation of crops, the keeping of farm animals, the growth of dairying, and efforts to conserve and promote the fertility of the soil. Ultimately, this last object must be supreme.

It was supposed in early years that Minnesota could not be self supporting in agriculture, but it grew to be the chief wheat-producing state of the Union, at one time, and is now prominent among agricultural giants. It received an extension of dairying from Wisconsin and Iowa; from an exclusive spring-wheat crop it has changed largely to winter wheat in the southern part of the state; corn production has continuously advanced northward to the surprise of every one; potatoes, oats, barley, and other crops have participated in the northward movement; and varied farming, necessitating an intelligent rotation of crops, has developed with accelerated speed.

The author's summary chapter is an admirable piece of work in practical agricultural economics. It contains one important assertion, however, that has never been substantiated, although popularly current since about five years ago—that "population of late has increased much faster than the total crop of food stuffs."

This belief was originally based on a hasty and superficial newspaper observation of rising prices, a diminishing per capita production of meat, a low crop production in 1911, and a scant vegetable production for a year or two. The per capita index number of the United States Department of Agriculture for 10 principal crops, weighted and combined, shows an unbroken increase by 10-year periods from 81.8 in 1866-1875 to 108.6 in 1906-1915. The inclusion of cotton and tobacco does not invalidate the import of these numbers that crop food is increasing per capita.

Another intrusion into economic history is the advice that state agricultural statistics should be collected by assessors of taxes. An experience of many years with such "statistics" justifies their suspicion, although they may be made useful if a percentage of error can be established. Again, statistical criticism is offered which does not seem to take account of the fact that the agricultural census of 1900 was one of exaggeration and that of 1910 was one of deficiency, owing to opposite office policies of editing and revising the schedules containing defective returns by the enumerators.

A mere narrative of facts, without interrelating them, would have been weak and dull, but the author has well understood the intellectual requirements of his subject; and he has constantly perceived facts and groups of facts as causes and has indicated the results. The plan of such a work as this may not admit the inclusion of a large treatment of technical agriculture, but the fundamental principles of such agriculture should be observed and these are recognized as the author proceeds from one historic phase to the next. The early "laws" of agricultural economics were derived mostly from static agriculture; a study of dynamic agriculture, such as this one, affords materials, with skilful arrangement and interpretation, for a much more intelligent understanding of the subject.

GEORGE K. HOLMES.

Department of Agriculture.

Studies in the Land Problem in Texas. By members of the Texas Applied Economics Club. Edited by LEWIS H. HANEY. Bulletin of the University of Texas, No. 39. (Austin, Tex.: University of Texas. 1915. Pp. 179.)

This is the fourth volume in a series prepared by students of economics at the University of Texas. The land problem in its

broadest sense is studied. Two chapters deal with conservation of mineral, lumber, and water resources; four with mineral, rural, and urban land taxation; and the remaining nine with the economic and social aspects of land ownership and tenantry. To some of the chapters valuable selected bibliographies are appended.

The discussion of causes of increase in tenantry is of particular interest. These are classified as current (economic, personal, and sociological) and historical. Increase in land values, increase in risks of ownership, need of more capital and consequent increase in interest burden are to be found in the best farming sections. The tendency toward the smaller sized farm is not taken as evidence of decentralization of ownership for there is evidence that "many widely scattered farms of moderate size are coming into the control of comparatively few men." Also the significant statement is made that "half of the farm lands in Texas are included in 2.7 per cent of the farms." Ignorance and poor health lessen the ability of farmers to become owners. In three counties investigated by the Hook Worm Commission more than 80 per cent of the people examined were found to be infected; and in 26 counties more than half were infected. Typhoid fever is also prevalent in the rural districts. Social apathy has much to do with inefficiency. The historical causes are to be found in conditions resulting from the Civil War.

Other chapters present valuable summaries of state aid to land purchase, the Torrens system of land registration, the economic effect of the Homestead law, and systems of tenancy.

Professor Haney's defense of the land speculator in his criticism of single tax theories is open to question. He says:

The speculator then, is to be regarded—in so far as he is honest and efficient—as the agency through which society sees to it that its lands are used on the basis of their full value; and we must remember that it is possible to fell forests to make improvements on land, and to exploit mines too soon and too rapidly, not building for the future.

In other words, it is good for society to give to some speculator the privilege of withholding from society something that belongs to it so that society may enjoy the good more when it can pay the price demanded by the speculator for the service rendered. The same argument would justify the owners of anthracite coal mines in limiting output in order to sell at "full value," *i.e.*, a monopoly value; or water-power concerns in delaying development of power sites in order to secure a monopoly price; or the holder of lots in

cities in delaying or interfering with the economic development of improvements. Society may be paying too much for the speculator's services in holding land for higher prices.

One phase of the land question, which is not generally given sufficient emphasis is that the provision of improved land credit facilities is but a partial solution of the land problem. Investigations as to farm incomes carried on by the United States government indicate that, at the present time, the tenant gets a much better rate of interest on his investments than does the owner.¹ Land today has a speculative value which a lowering of interest rates through state aid or coöperation would tend to increase. Some strong inducement must be given the owner who wishes to retire to sell to some one else who wishes to live on the land and operate it. Landowner operation has been the justification of private property in land and unless some other basis is found for that justification, conditions must be so controlled that the land operator will continue to be the owner of the land he operates.

As a whole the bulletin is typical of the kind of work needed in every state. When such work is done in other states there will be a much better foundation for the teaching of agricultural economics.

PAUL L. VOGT.

Ohio State University.

Swamp Land Drainage with Special Reference to Minnesota. By BEN PALMER. The University of Minnesota Studies in the Social Sciences, No. 5. (Minneapolis: University of Minnesota, 1915. Pp. 138.)

In the introduction to this study the author estimates "that there are in the United States today approximately 80,000,000 acres of swamp and overflowed lands, an area of unproductive land greater than the Philippine Islands and nearly three times as large as Great Britain and Ireland." The benefits to be derived from land drainage are as follows:

- (1) A greater certainty of a full crop on agricultural lands, because of a reduction in the damaging effect of frost on vegetation;
- (2) an increase in the yield per acre, with a corresponding permanent increase in the market value of the land;
- (3) improvement of public highways;
- (4) benefits to transportation companies because of the increase in freight tonnage due to the raising of more agricultural products;
- (5) benefits to towns near drained districts because of increased business;
- (6) benefits to railroad companies due to decrease in cost of maintaining trackage, as result of lessening of damages caused by floods and by

¹ Bull. No. 41, U. S. Dept. of Agriculture.

softening of roadbeds; (7) improvement in public health, due to the elimination of fever and disease breeding swamps and marshes (p. 3).

The country whose government has given the most attention to land drainage is Holland. Other countries for which the drainage situation is discussed are France, Great Britain, Ireland, Austria, Prussia, Russia, Denmark, Greece, Norway, Sweden, Algeria, Australia, and Mexico. The survey shows that European countries, with the probable exception of Russia, have not been backward in the work of swamp land reclamation by public action.

Swamp Land Reclamation in States other than Minnesota is the title of the third chapter. The different states are taken up separately, and are considered with respect to their own particular problems. Florida has more overflowed land than any other state in the union, and is discussed first. Illinois, Mississippi, Arkansas, Missouri, North Carolina, South Carolina, Michigan, Wisconsin, California, Texas, Alabama, Indiana, Virginia, Tennessee, South Dakota, Iowa, Utah, Oklahoma, Colorado, Montana, and Wyoming, are taken up in the order named. The greatest amount of reclamation work has been done in Minnesota, Illinois, Iowa, Indiana, and Michigan. About one sixth of the original swamp land of the United States has been drained. In some states the constitutions expressly give the legislature power to pass acts; but even in the absence of constitutional authorization the courts have sustained legislation as a valid exercise of the police and taxing powers and of the power of eminent domain.

The last three chapters are a discussion of the drainage question in Minnesota: The Development of Drainage Legislation; Drainage Procedure; Swamp Land Reclamation. Public drainage works already constructed have reclaimed over 7,000,000 of the 10,000,000 acres of swamp lands in Minnesota originally too wet for cultivation. This work has been done at a cost of \$13,700,000, or about two dollars an acre. Although the assessed benefits amount to \$24,675,000, and show a return of about two dollars for every dollar invested, yet the actual direct benefit to landowners has been estimated at from five to eight dollars for every dollar expended in drainage (p. 98).

The appendix contains: (1) drainage statutes of states other than Minnesota; (2) drainage laws of Minnesota; (3) drainage work in Minnesota; (5) authorities; and (6) table of cases.

C. W. WASSAM.

State University of Iowa.

NEW BOOKS

BENGSTON, N. A. *The wheat industry. For use in schools.* (New York: Macmillan. 1915. Pp. xiii, 341.)

GALPIN, C. J. *The social anatomy of an agricultural community.* Research bulletin no. 34. (Madison: University of Wisconsin, Agricultural Experiment Station. 1915. Pp. 34, illus.)

In presenting the results of the survey of Walworth County, Wisconsin, Mr. Galpin has again made a valuable contribution to the literature on problems of scientific organization of community life. The bulletin calls attention to the importance of the village as a factor in rural organization. Students are beginning to recognize that with improvement in roads, better means of transportation, telephones, rural free delivery including parcels post, and the retiring of farmers to villages on giving up the farm, the tendency is to make the village the center for most rural interests. Rural organization, then, is dependent upon bringing into the psychical environment of a given village the greatest number of those who can be most economically reached. The charts included show how the area covered by the principal community relationships may be more efficiently adjusted from the physical as well as from the psychical point of view.

PAUL L. VOGT.

JOHNSTONE, S. J. *The rare earth industry.* (New York: Appleton. 1915. \$2.75.)

MARSHALL, F. R. *Sheep. Features of sheep industries of United States, New Zealand, and Australia compared.* Department of Agriculture bulletin no. 313. (Washington: Animal Industry Bureau. 1915. Pp. 43. 10c.)

MARTIN, G. and BARBOUR, W. *Industrial nitrogen compounds and explosives.* (New York: Appleton. 1915. \$2.75.)

MORGAN, J. O. *Field crops for the cotton belt.* (New York: Macmillan. 1915. \$1.75.)

SOHNREY, H. *Kriegsarbeit auf dem Lande.* (Berlin: Deutsche Landbuchhandlung. 1915. Pp. 157. 2 M.)

THOMPSON, J. W. *United States mining statutes annotated.* Pt. I. Sections and statutes relating to metalliferous and coal mining. Pt. II. Miscellaneous mining subjects. Bulletin 94. Law serial 4. (Washington: Department of the Interior, Bureau of Mines. 1915. Pp. xxxix, 860; xxxv, 861-1772.)

Report of the sixth annual meeting of the Commission of Conservation held at Ottawa, January 19-20, 1915. (Ottawa: Commission on Conservation. 1915. Pp. 338.)

The rubber industry of the Amazon and how its supremacy can be maintained, based on the experience of Joseph F. Woodroffe. Edited with additions by HAROLD H. SMITH. (London: Bale. 1915. 21s.)

Manufacturing Industries

The Tin-Plate Industry. A Comparative Study of its Growth in the United States and in Wales. By D. E. DUNBAR. Hart, Schaffner & Marx Prize Essays, XX. (Boston: Houghton Mifflin Company. Pp. 133. \$1.00.)

The tinplate industry has received a great deal of attention both because of its spectacular rise in this country after the adoption of the highly protective duties in 1890 and because of the vicissitudes which tinplate manufacturing has undergone in free-trade Wales after the loss of the American market.

Mr. Dunbar, like Mr. Jones in his recently published monograph on the same subject, considers the changes in the technique of production, the conditions of labor in the various branches of the work, and the formation of associations and combinations for the purpose of controlling the making and the marketing of tin plates. The book concludes with an analysis of the import and export trade and with an attempt to ascertain what light the history of the tinplate industry in the United States throws on the policy of "protection to young industries." The writer grants that high duties stimulated production, but he is of the opinion that the prime factors in the wonderful development were technical progress, an efficient labor supply, cheap and abundant raw materials, good organization, and enormous markets. These conclusions are undoubtedly correct.

One may challenge Mr. Dunbar's statement that the formation of the American Tinplate Company was due to unhealthy competition; it was rather the desire on the part of the manufacturer to exploit to the full the advantages of a protected market which led first to "gentlemen's agreements" and when these proved unsatisfactory to the consolidation of interests in the trade. Mr. Dunbar's own narrative does not bear out his statement. He adds to it on page 103, "to be sure not a single firm had failed in the period of drastic competition in the nineties *and profits were still good*, but there were altogether too many firms in the field"; and on page 77, he writes, "although not a single firm had failed during this period of competition *the falling rate of profit was not regarded with satisfaction* by the manufacturers who made several unsuccessful attempts to stop the decline." No manufacturers regard with satisfaction a falling rate of profit, but is a falling rate of profit identical with unhealthy competition?" Professor Taussig in *Some Aspects of the Tariff Question*, referring to the formation

of the American Tinsplate Company, states (pp. 177-178): "the protective tariff became the mother of a trust, and that trust exploited the possibilities of protected monopoly"; and again (p. 181): "at no time after 1901 was there such an exploitation of the tariff as in the year immediately after the Tinsplate Company was formed."

The author disposes effectively of the manufacturers' claims that they still need the retention of duties on tin plates; he shows the untenability of the "pauper labor" argument as well as of the arguments that the Welsh producer is enjoying a lower cost of tinsplate bars, that the interest and maintenance charges in the American industry are larger than in Wales and that the producers in this country are under disadvantages in freight rates. Mr. Dunbar's discussion of the sales of American tin plates in Canada at a lower price than in the United States seems futile, and one is rather surprised to find it in the book. One misses a more extensive account of the legislative history of the industry; as to the "fascinating industrial history" it is stripped of all its fascination in the writer's survey. Many topics are treated too briefly to permit of anything but a colorless chronicle of events. The book shows a careful study of the literature of the subject and it gives one a comprehensive idea of the tinsplate industry both in its immediate and its larger aspects.

SIMON LITMAN.

University of Illinois.

NEW BOOKS

- ADCOCK, K. J. *Leather; from the raw material to the finished product.* (New York: Pitman. 1915. Pp. 161. 75c.)
- BULLOCK, W. *Timber; from the forest to its use in commerce.* (New York: Pitman. 1915. Pp. 149. 75c.)
- VAN DELDEN, I. W. *Studien über die indische Juteindustrie.* (Munich: Duncker & Humblot. 1915. Pp. vii, 182. 5 M.)
- GARDNER, W. M. *The British coal-tar industry.* (London: Williams & Norgate. 1915. Pp. 448. 10s. 6d.)
- HAFFARDS, G. M. & Co. *Fall River and its manufactories. 1803-1914.* Twenty-first edition, revised. (Fall River: Mass.: G. E. Bamford. 1915. 15c.)
- KERTESZ, A. *Die Textilindustrie Deutschlands im Welthandel.* (Braunschweig: F. Vieweg & Sohn. 1915. 3.50 M.)
- Annual statistical report of the American Iron and Steel Institute for*

1914. (Philadelphia: American Iron and Steel Institute. 1915. Pp. 118. \$5.)

Catalogue of articles made in the Birmingham district. (Birmingham, Ala.: Chamber of Commerce. 1915. Pp. 64.)

Transportation and Communication

Regulation of Railroads and Public Utilities in Wisconsin. By FRED L. HOLMES. Appleton's Railway Series, edited by EMORY R. JOHNSON. (New York: D. Appleton and Company. 1915. Pp. xi, 375. \$2.00.)

As one of Appleton's Railway Series, this book seems out of place. Its subject-matter covers the general field of public utilities, and although there is much elementary material relating to accounting, rates, valuation, and corporation finance, the scope of the work, as the title indicates, is limited to a description and defense of the methods and activities of the Wisconsin Railroad and Utilities Commission. It can hardly be assumed, therefore, that Mr. Holmes' book is meant as a scientific textbook of the character of Ray Morris' *Railroad Administration* and Hooper's *Railroad Accounting*.

Mr. Holmes, having been a member of the Wisconsin legislature which framed the laws regulating public utilities, naturally claims too much for his state, "as one of the pioneers in the field of railroad and public utility regulation." He ignores almost completely the previous activities of the Interstate Commerce Commission and of the Massachusetts and New York railway commissions. Certainly, in the matter of railroad regulation, Wisconsin has done little more than follow the methods and policies established by the Interstate Commerce Commission, and under existing federal control of interstate commerce it is difficult to see how it could do otherwise. Even the railroad valuations undertaken by Wisconsin since 1903 have been primarily for taxation purposes and not for regulation. It is Mr. Holmes' contention that Wisconsin utility legislation, on the whole, has been satisfactory, and that this has been due mainly to the "scientific drafting of the laws." By this is evidently meant the participation of the state university professors in the preparation and in the application of the laws. The book mentions the valuable assistance rendered by the university staffs, and there are numerous quotations from utterances and writings of its members.

It is not necessary in this review to consider all the topics covered in the 24 chapters of the book as the treatment of the subject-matter is elementary and to some extent consists of quotations from published articles and addresses. The chapter on valuation is interesting. The Wisconsin Utility Commission definitely adopted the "reproduction cost" basis of valuation. This policy is praised by Mr. Holmes. In view, however, of the very recent repudiations of the reproduction theory by prominent utility regulators, who fear the railroads will be thereby valued too highly, it may be expected that the Wisconsin authorities also will reject the theory. Possibly Mr. Holmes will then realize the force of his own statement: "It is not correct to speak of a standard method of valuation" (p. 41).

The only variation of the "reproduction method" suggested by Mr. Holmes is the "cost new less accrued depreciation." The Wisconsin public utility law directs every public utility in the state to "carry a proper depreciation account whenever the Commission after investigation shall determine that such depreciation account can be reasonably required." Since the determination of the proper and adequate rates of depreciation is left to the state commission, it can be readily inferred that this power, to be properly exercised, requires serious and difficult investigation and constant and intuitive insight into the operating conditions of utilities. Mr. Holmes describes briefly the activities of the commission in its work of determining depreciation rates, particularly its compilation of "life tables" of different classes of properties. He discusses also, in an elementary manner, the bookkeeping methods of providing for depreciation, but intimates that because of the many engineering and economic problems, no attempt is made to cover the entire field—that would require a volume in itself.

A. M. SAKOLSKI.

Albany, N. Y.

Railway Regulation. An Analysis of the Underlying Problems in Railway Economics from the Standpoint of Government Regulation. By I. LEO SHARFMAN. (Chicago: LaSalle Extension University. 1915. Pp. iv, 230. \$2.00.)

Professor Sharfman's *Railway Regulation* is avowedly written as a textbook, and its subtitle, "an analysis of the underlying problems in railway economics," even as limited, arouses hope. Beginning with a few well-chosen paragraphs on the extent and importance of

railway transportation, the author passes to a rather inadequate statement of the problem of regulation; and then takes up an extremely sketchy account of American railway development and of rate-making conditions and forces. He concludes with a description and analysis of state and federal regulation that occupies 136 of the 223 pages of text.

The book has no inconsiderable merits: (1) It contains a clear-cut and fairly satisfactory statement of the economic peculiarities of the railway transportation industry as leading to monopoly and discrimination; and this statement is introduced at points where it throws light on the problem. It is surprising how few of those who know that railways are natural monopolies are able to tell *exactly* the reason for the faith that is in them. (2) The book presents a good discussion of reasonable discrimination and its difference from unreasonable discrimination. (3) The author is able to include brief discussions of such recent events as the Minnesota rate case and the Shreveport case. (4) There is a useful survey of state public utility laws extending through the year 1913, and making up about 15 per cent of the book. This last contribution, however, has for some time been available to American students in an article on "Commission regulation of public utilities," written by Professor Sharfman for the *Annals of the American Academy*.

Quotations from Hadley, Ripley, Hammond, the courts, and articles by Professor Dixon and Mr. Coleman are abundant. The book strikes one as being pretty mechanical in make-up and scrappy in treatment. The ill effects of the scrappy treatment appear in the inadequate discussion of valuation. As nearly as one can make out, the author favors cost of reduplication as the best basis, though one can not be certain, for he appears to have "cost of reduplication" confused with "present value."

In the main, the book is logically sound enough, but several points should be queried: On page 19 it is implied that competition is the normal condition in all manufacturing industries. On pages 72, 73, and 80, the author argues that classification is distinct from tariffs, and that "value of commodity" or "what the traffic will bear" is the basis in the former, and distance or cost in the latter. To the reviewer the distinction seems too sharply drawn. On page 100 it is said to be impossible to consider investment in judging the (absolute) reasonableness of particular rates, and elsewhere the impracticability of basing rates upon cost is asserted.

On the other hand, "public welfare" is held up as an important principle in rate making, and the words "fair," "undue," and "natural," appear freely; while labor is to be moved—where? The tendency of the Michigan group appears to be toward denying the expediency of using estimated costs, and toward trusting to some one's opinion as to what constitutes social welfare. On page 140 the author seems to hold that public welfare counselled the looseness in granting charters that characterized our early policy. On page 99 is the rather naïve assumption that the courts more truly represent the people than do the legislatures.

As minor errors, are found such statements as that the Charleston and Hamburg was chartered in 1829; a failure to note the amended charter of the Union Pacific in 1864 (p. 33); looseness in attributing the grant of \$65,623,000 to all the transcontinental roads (p. 38); and leaving the possible inference on page 37 that the Texas land grants are typical of other states.

One can hardly call Professor Sharfman's book an important contribution to his subject nor a satisfactory text for a general course on railway transportation. But if one wants a brief, clear survey that hits the top of most of the high points in the problem of American railway *regulation*, the book will have considerable utility.

LEWIS H. HANEY.

University of Texas.

English Railways. Their Development and their Relation to the State. By EDWARD CLEVELAND-STEVENS. No. 42 in the Series of Monographs by Writers Connected with the London School of Economics and Political Science, edited by W. PEMBER REEVES. (London: George Routledge and Sons, Ltd. 1915. Pp. xvi, 332. 6s.)

The title of this volume is somewhat misleading as, essentially, the book is a review of the history of railway amalgamation in England until 1900. After pointing out the precedents for railway amalgamation that already existed in the case of turnpikes and canals, the author goes on to deal with the railway amalgamations of the forties, to which, indeed, he devotes nearly half of the volume. In the discussion of this as also of the subsequent period, his purpose is not so much to enter into minute analysis of the details of amalgamation arrangements as to elucidate the attitude of

Parliament towards the movement. This attitude, he establishes, has never been one of definite condemnation of amalgamation, though it has been one of apprehension.

The recommendations of the Gladstone Committee of 1844 regarding state purchase are given considerable attention, perhaps on the ground that state purchase is but a supreme example of amalgamation. The treatment here is not altogether satisfactory as it is not made clear that neither the appointment of that committee nor the passage of the purchase act of 1844 in any way indicated a contemplation of state purchase by Parliament, the act itself being apparently regarded as a formal reservation of Parliament's rights and not as a declaration of policy.

The difficulties under which the Board of Trade labored in making effective the powers over railways given to it by the acts of 1840 and 1842 are brought out very vividly, but it is doubtful whether the author is justified in accepting, without important modification, the parallel that Hadley draws between the powers of the board and of the Massachusetts Railroad Commission of 1869. Where the board failed was hardly "where the Massachusetts Commission succeeded," for in several respects there was a more or less continuous and successful development of Board of Trade control from this time onwards, but it was in the attempt to use it as a kind of executive committee of Parliament when that body was not ready to surrender its direct and detailed supervision of these matters. This difficulty the Massachusetts commission did not have to face.

In discussing the Caldwell legislation of 1854, Mr. Cleveland-Stevens urges that if Caldwell's original bill, providing, among other things, for the authorization of working agreements by the Board of Trade, had been accepted, "a fairly harmonious and comprehensive railway system would have resulted: . . . the shifting and ill-considered legislation which is a necessary consequence of Parliamentary control would have been avoided." He admits that, on the other hand, a bureaucratic control, hampering development, might have grown up, but he fails to make clear how serious an evil this might have become.

The amalgamation campaign of the railways in 1872 is graphically depicted and his estimate of the work of the Joint Select Committee of that year is a just one. As he points out, the report of the committee was a sober, reassuring document, declining to condemn amalgamation but providing material for the consideration

of the problem as a whole. The ensuing act of 1873, important though it is from the point of view of the regulation of discrimination, did not make any material change in the existing situation as affecting the control of amalgamation. The powers granted to the new railway commissioners regarding the sanctioning of working agreements were of little significance. Parliament continued to retain active control in its own hands.

From 1874 to 1900, the amalgamation question was less conspicuous than it had been during the preceding generation. An excellent description is given of the part played by Sir Edward Watkin in connection with the consolidation plans of the Manchester, Sheffield and Lincolnshire Company and also with the South Eastern and the Chatham companies. Like George Hudson in the forties, the pen-picture of whose forceful influence is equally good, Watkin was a master of men, though, unlike Hudson, an honest one.

The process of amalgamation in England would seem to have been of advantage to both the companies and the public, and the author is of the opinion that still further developments in this direction would be justified. At the same time, parliamentary control should be made less minute by the establishment of a railway board with a wide and permanent control.

Mr. Cleveland-Stevens has given us a book that, taken as a whole, constitutes a very satisfactory general history of the English railway amalgamation movement. He has examined the parliamentary literature thoroughly and has shown excellent judgment in his utilization of it. In many ways, his little volume is a model of research.

ERNEST RITSON DEWSNUP.

University of Illinois.

NEW BOOKS

BUCK, A. M. *The electric railway.* (New York: McGraw-Hill. 1915. Pp. xi, 390, illus. \$3.)

CLARK, F. B. *The constitutional doctrines of Justice Harlan.* Johns Hopkins University studies in historical and political science under the direction of the departments of history, political economy, and political science, series XXXIII, no. 4. (Baltimore: Johns Hopkins Press. 1915. Pp. vii, 208, xii. \$1.)

Chapter 4 is entitled Interstate and Foreign Commerce.

FISHER, J. A. *Railway accounts and finance.* Third edition. (New York: Van Nostrand. 1915. \$4.)

FRANKFURTER, F. *A selection of cases under the Interstate Commerce act.* (Cambridge: Harvard Univ. Press. 1915. Pp. xi, 706. \$3.)

GARRISON, F. R. *Publication and filing of tariffs*. (Chicago: LaSalle Exten. Univ. 1915. Pp. v, 160.)

GARTNER, K. K. *Gartner's notes to the Interstate Commerce Commission reports*, vols. 1-30. (Louisville, Ky.: Baldwin Bk. Co. 1915. \$15.)

Hsu, M. C. *Railway problems in China*. Columbia University studies in history, economics, and public law, vol. LXVI, no. 2. (New York: Longmans. 1915. Pp. 184. \$1.50.)

The Chinese nation, in its railway building, has been driven by its inexperience and want of suitable business organization to rely upon the aid of foreigners, in many instances almost devoid of good faith. Mr. Hsu has well described his country's plight and the process by which competition among the foreigners and growth of knowledge and experience in China has begun to give some degree of relief. He has also brought out clearly the exceptionally striking influence exerted by railways upon the whole national life, not only after they have been built but even by anticipation, as government has been shaped by the popular consciousness of an importance yet to be realized (pp. 128-129).

An especial advantage of this monograph over other books on the subject is the author's acquaintance with Chinese sources and, correspondingly, his ability to present sympathetically the Chinese view of the controversial points of which the subject in so large part consists.

A. P. WINSTON.

KETCHUM, E. S., editor-in-chief. *Traffic geography*. (Chicago: American Commerce Association. 1915. Pp. xxxv, 321.)

A series of 25 handbooks is to be issued by the American Commerce Association as its "Traffic Library," of which this is the first volume. Traffic information will be presented under the following leading divisions: traffic geography; principles governing freight charges; preparing, routing, and tracing shipments; the interstate commerce law and procedure; principles governing the adjustment of charges; loss, damage, and overcharge claims; traffic department organization and management; and export and import shipping. The complete work will embrace about 5000 pages of text, fully indexed, and is expected to be of special service to traffic directors of big concerns.

This volume on *Traffic Geography* covers a variety of topics. The first eight chapters, more than half the book, constitute an interesting, though at times elementary, treatment of certain aspects of economic geography. Thus, there is a consideration of the origin and nature of commerce, the relation of transportation to industry and commerce, the factors controlling industry and commerce, the natural physical divisions of the United States, the geographical distribution of the principal natural products of the United States, the factors controlling the location of industries, the leading commercial centers, and the factors which develop traffic flows. The remainder of the

book is more specialized and technical in character, consequently of less general interest, however important and valuable it may be for reference purposes to the traffic expert. For example, there are chapters on the classification territories, miscellaneous rate-construction points, traffic terminology, etc. There are many maps and diagrams which, as usual, greatly facilitate the ease of reading.

AVARD L. BISHOP.

LUST, H. C. *Quarterly digest of decisions under the Interstate Commerce act.* No. 4. (Chicago: Traffic Law Bk. Co. 1915. Pp. 164. \$2.)

PENNYBACKER, I. S., editor. *The official good roads year book of the United States.* (Washington: American Highway Association. 1915. Pp. x, 498.)

Among the more important features included are: (1) a review of legislation, which includes state aid legislation, local bond issues, civil service, automobile registration, and convict labor; (2) history of road building; (3) reports of progress in road building; (4) highway engineering education. The text also includes a full bibliography of bulletins and magazine articles published during the past year relating to roads. A number of articles on the relation of good roads to economic and social welfare are mentioned. P. L. V.

PRATT, E. A. *The rise of rail-power in war and conquest, 1833-1914.* (London: King. 1915. Pp. xii, 405. 7s. 6d.)

SPEARS, J. R. *The story of the American merchant marine.* New edition. (New York: Macmillan. 1915. Pp. xxvii, 340. \$1.50.)

VOGEL, W. *Geschichte der deutschen Seeschiffahrt.* Vol. I. *Von der Urzeit bis zum Ende des XV. Jahrhunderts.* (Berlin: Reimer. 1915. Pp. 560. 14 M.)

Trade, Commerce, and Commercial Crises

Agricultural Commerce: The Organization of American Commerce in Agricultural Commodities. By GROVER G. HUEBNER. (New York: D. Appleton and Company. 1915. Pp. xiv, 406. \$2.00.)

More than one half of the book is devoted to an indication of the regions of production of six important farm products and a detailed description of their distribution from the grower to the consumer. The hauling of grain to country elevators; the management of these elevators; shipment to the central (or "primary") markets; the operation of the elevators and exchanges located there; the transfer of the grain to mills or to seaboard markets; and the factors influencing the price at each stage—all are treated at length in two chapters. Similarly, in the next two chapters, are described the cotton belt, ginning and shipment to

the local market, compressing and transportation to interior points of concentration and to ports, sale to domestic mills or exportation, and the fixing of prices. Then, after a digression into the subject of "futures" and their effect on the "spot" prices of grain and cotton (ch. 7), live-stock, wool, tobacco, and fruit are traced through the successive steps in their marketing. The account is completed by chapters on commercial inspection and grading, the financing of crops, and other related subjects.

The detailed description of marketing processes is of chief interest. The author has pieced together information from many sources, always with full credit, and, by the bibliographies at the close of the various chapters, has cleared the way for further study. Facsimiles of numerous forms in use by elevators, inspectors, compress companies, and others are helpful. The treatment is eclectic, rather than critical; the multiplicity of detail, rapidly enumerated, detracts from clearness. This defect is especially pronounced in chapter 2, dealing with the classification of agricultural markets and marketing processes, where the impossible task of tracing the normal methods of handling diverse products is attempted. Frequent statements like the following occur: "The functions of the central markets for farm products vary in detail but may be generally summarized"—sometimes under as many as ten heads. The usefulness of the work will doubtless be found greater for reference than as a textbook, for which, the author states in the introduction, it is especially designed.

The recent increase in grain exports from the United States is attributed to the European war (p. 61), without reference to the increase of 128 million bushels in the wheat crop of 1914, which, coming after a full crop, would explain most of the gain of 167 million bushels in the exports for the year ending June 30, 1915. The war is probably more responsible for the enhanced value than for the enlarged quantity. Galveston, with wheat exports exceeding those of New Orleans last year and only one or two million bushels less than New Orleans in the two preceding years, can scarcely be classed among the "minor grain-shipping ports" (p. 60). The table of cotton statistics (p. 117) could with advantage be completed by a line showing the imports into the United States. The imports of "clothing" wools (Class 1) in 1913 were 67,239,000 pounds, instead of 29,937,000 pounds (p. 206). Hides were placed on the free list by the tariff act of 1909 and continued there by the act of 1913 (p. 385). These minor points of criticism do not seri-

ously detract from the service rendered by Dr. Huebner in giving for the first time a connected account of the distribution of agricultural products in the United States.

FRANK R. RUTTER.

George Washington University.

NEW BOOKS

FREELING, H. *Wirtschaftliche Probleme bei den deutsch-englischen Zuckerhandel.* (Karlsruhe: G. Braun. 1915. Pp. viii, 150. 3 M.)

HALL, S. R. *Short talks on retail selling.* (New York: Funk & Wagnalls. 1915. Pp. 170. 75c.)

JEVONS, H. S. *The British coal trade.* (New York: Dutton. 1915. Pp. xii, 876.)

To be reviewed.

JOHNSON, E. R., and collaborators. *History of domestic and foreign commerce of the United States.* Two volumes. (Washington, D. C.: Carnegie Institution of Washington. 1915. Pp. xv, 363; ix, 398.)

To be reviewed.

NYSTROM, P. H. *The economics of retailing.* (New York: Ronald Press. 1915. Pp. xi, 407. \$2.)

To be reviewed.

MILLER, T. S. *Cotton trade guide and student's manual. A text-book for the American trade and higher institutions of learning.* (Austin, Tex.: E. L. Steck. 1915. Pp. ix, 431.)

PEDDIE, J. T. *On the relation of imports to exports.* (London: Longmans. 1915. Pp. v, 88. \$1.)

This publication consists of two essays, of which the first bears the title printed on the cover and the second, Foreign Exchange—the Bill of Exchange. The author's main thesis, so far as there can be said to be a thesis in the hodge-podge of opinion and comment which he offers us, seems to be that Great Britain should place restrictions upon imports, in order effectively to build up her industries, "Free Trade" having destroyed her capacity for resistance "on anything like the basis of a modern first-class Power."

H. G. B.

ROBERTSON, D. H. *Study of industrial fluctuation.* (London: King. 1915. 7s. 6d.)

STEPHENSON, J. *The principles and practice of commerce.* (London: Pitmans. 1915. 5s.)

WELD, L. D. H. *The marketing of farm products.* (New York: Macmillan. 1915.)

To be reviewed.

WEST, H. H. *Parcel post profit from farm produce.* (Rockford, Ill.: H. H. West. 1915. Pp. 31. 50c.)

South American handbook; a compilation of information and statistics

regarding the public indebtedness, foreign commerce and railway development of the South American republics. (New York: National Foreign Trade Council, 64 Stone St. 1915. Pp. 21, 55. 25c.)

Navigation laws of the United States, 1915. (Washington: Dept. Commerce. 1915. Pp. 585. \$1.)

Methods of wholesale distribution of fruits and vegetables on large markets. Dept. Bull. 267. (Washington: Office of Markets and Rural Organization. 1915. Pp. 28. 5c.)

Accounting, Business Methods, Investments, and the Exchanges

Principles of Cost Accounting. By JOHN RAYMOND WILDMAN. (New York: New York University Press. 1914. Pp. 96.)

Elementary Accounting Problems. By JOHN RAYMOND WILDMAN. (Brooklyn, N. Y.: The William G. Hewitt Press. 1914. Pp. x, 218.)

Principles of Accounting. By JOHN RAYMOND WILDMAN. (Brooklyn, N. Y.: The William G. Hewitt Press. 1914. Pp. 357.)

These three books by Professor Wildman have grown out of his experience as a teacher of accounting in the New York University School of Commerce, Accounts and Finance. Except for the *Principles of Accounting* they are intended as general reference books.

The first is a concise statement of the underlying principles that are fundamental to cost accounting. In 96 pages the author gives a clear-cut statement of the purposes, the chief problems, and the usual solutions of cost accounting. There is a noticeable absence of padding by insertion of forms and discussion of incidental questions, so commonly found in books on this subject. For the practical man who is uninitiated in the subject of cost accounting, or as a text for the student, this little book will be found valuable.

The second volume of the series, *Accounting Problems*, is intended as a piece of pedagogical mechanism, and aims to develop through the use of problems the main principles of accounting. It sets forth concrete, hypothetical situations presenting the necessity for accounting analysis, varying from a simple determination of profits by the asset and liability method for a business keeping only single entry books to a statement of realization and liquidation in the case of dissolution of a corporation. The problems, 26 in number, are evidence of the pedagogical skill of the author. They call for the application of the principles of accounting

which the student has learned, and insure that he shall not imagine that he has mastered these principles merely because he has assented to them.

The third volume, *Principles of Accounting*, is designed to present the framework of the theory of accounts. It is to this volume that the reader naturally turns with greatest expectations, for it is in this field that the literature of the subject is most meager. The volume displays a wide range of knowledge of accounting problems and practice as well as of legal cases involving points of accounting theory. Accountants and teachers desiring a book which sets forth concisely and clearly accepted accounting practice will find in this volume a valuable aid. It is somewhat disappointing in its lack of strong theoretical analysis. The earlier chapters, which serve as a general introduction setting forth the objects and scope of accounting, impress one as being rather rambling and lacking in point. Witness the statement that "a liability account may be defined as one that sets forth a liability"; and the following paragraphs:

While it is difficult to trace historically the evolution of books it is not improbable that the first records were kept upon stone or upon tablets of some composition in which stone played an important part. Parchment or papyrus presumably followed the stone age, only to be supplanted by the highly refined kinds of paper of which the present-day books are made.

Just what jurisdiction or control the government exercised over the books of the earlier periods is not known. That certain European countries have placed certain restrictions upon books and methods of bookkeeping is a well known fact. In Cuba, for example, unless such law has been recently repealed, it is necessary that all books of account be submitted to government agents who place on each page an official stamp and exact a tax for so doing.

The remainder of the book is filled with information valuable to the student of accounting or practitioner and is fertile in suggestions. The author is weakest when he attempts to give the reasoning upon which his conclusions with respect to sound practice are based. Thus, when discussing the income account, the item of insurance is included in the deduction from the income group. In answer to the question, "How can you consider insurance paid for the protection of your factory property as an expense of capital?" the reader is told that "capital is invested in the factory property and just as interest paid for the use of money so employed is considered as an expense of capital, so insurance paid for the protection of this capital is a similar expense of capital." The wages

of the watchman at the factory is not charged to insurance nor treated as a deduction from income, because "no money is invested in the watchman, and, therefore, there is no expense which can be traced directly to capital." Taxes are included in this group for the reason "that they are likewise paid for the protection of capital." For an author who has so keen an appreciation as Professor Wildman of the fact that all accounting principles must be justified by the purposes which accounting is intended to serve, and that all classifications and subdivisions must find their reason for being in the same cause, such analysis as the above is unfortunate.

The chapter on depreciation is valuable because of its legal references showing the development of the present attitude of the courts on this question. The chapters on reserves and on preparation of financial statements are especially good.

DAVID FRIDAY.

University of Michigan.

Advertising. Its Principles and Practice. By HARRY TIPPER, HARRY L. HOLLINGSWORTH, GEORGE BURTON HOTCHKISS, and FRANK ALVAH PARSONS. (New York: The Ronald Press Company. 1915. Pp. xi, 575.)

The Business of Advertising. By EARNEST ELMO CALKINS. (New York: D. Appleton and Company. 1915. Pp. xvi, 363. \$2.00.)

The Elementary Laws of Advertising and How to Use Them. By HENRY S. BUNTING. (Chicago: The Novelty News Press. 1913. Pp. viii, 188.)

Advertising. Selling the Consumer. By JOHN LEE MAHIN. (New York: Doubleday, Page and Company for The Associated Advertising Clubs of the World. 1914. Pp. xviii, 260. \$2.00.)

The New Business. By HARRY TIPPER. (New York: Doubleday, Page and Company for The Associated Advertising Clubs of the World. 1914. Pp. xv, 391. \$2.00.)

Of these books, the first three may be classified as technical treatises on advertising. They appear to be excellent in their field. It does not lie within the province of the economist, but rather in that of the psychologist or the advertising expert, to pass upon the technique with which they concern themselves. The Tipper-Hotchkiss-Hollingsworth-Parsons book and the Calkins book may

be described as complete manuals of advertising practice. Bunting is an exceedingly compressed, but clear and lively, statement of some of the fundamental laws of advertising.

To a certain degree in Mahin's book, and to a greater extent in H. S. Tipper's book, there is present another element, which is of interest to the student of economic policies, namely, the discussion of the general significance of advertising in relation to the other agencies of distribution which have been evolving in recent decades in this country. The fullness of knowledge concerning practice with which these men write is admirable; equally admirable is their unqualified stand for truth of statement and ultimate service to the consumer, as bases for judging the value of advertising. But these books do not provide us with a systematic and objective treatment of modern distribution such as we should expect at the hands of trained economists. This does not imply a censure. The thought-provoking character of the discussions in these books is ample proof that the writers would make splendid coöperators with men of strictly scientific training and point of view, in an endeavor to formulate the underlying principles and significant drift of the modern distributive process.

It is less creditable that so many economists remain ignorant of the nature of the modern market. Pedagogical necessity may excuse the archaic simplicity of the illustrations of "supply and demand" commonly presented to college sophomores in elementary courses in economics. But when we turn to the research frontier of our science, and contemplate the distribution of research workers into various fields, it is certainly an evidence of "the cake of custom" that, until the last five years, few have attacked the extraordinary complications and fateful tendencies of the American domestic market. This market, with its specialization and standardization of merchandise by trademarks, trade names, packages, and talking points, its guarantees (often shrewdly calculated on the basis of experience with returns), its "quantity prices," "free deals," and cut-price campaigns, as over against policies of "fixed prices" and "price maintenance," its "created demand" and dealer's helps, its independent dealers versus the consolidations represented by syndicate buyers, buyer's unions and chain stores, its exclusive agencies and diverse and ingenious contracts in restraint of trade, its strategy of premiums and "leaders," skin grades and predatory forms of competition, its elaboration of service and duplication of equipment, offers a wonderful opportunity for the

scientific investigator to find for himself a reasonably circumscribed topic of research, and to mature conclusions much needed in the formation of an intelligent public opinion.

EDWARD D. JONES.

Principles of Depreciation. By EARL A. SALIERS. Ronald Accounting Series. (New York: The Ronald Press Company. 1915. Pp. 200. \$2.50.)

This book is exceedingly difficult to evaluate satisfactorily. It follows in the main the ideas and classifications generally accepted by the accounting profession, and will doubtless be favorably received by American professional accountants. It is the first comprehensive work on depreciation presented by an American writer, and for this reason alone is interesting. It will be useful as a handbook or as an introductory textbook, and it will serve in further emphasizing the importance of regular depreciation allowance in industrial management.

There are 16 regular chapters, an additional chapter explaining the use of logarithms, one giving a selected bibliography on depreciation, a detailed table of contents, and a fairly adequate index. The principal text is divided into three parts: I, Theory; II, Practical Applications; III, Determining the Depreciation Charge. Part I (5 chapters) takes up in turn the character of industrial plant, analysis of hydro-electric plant, plant register, depreciation reserves versus depreciation funds, and depreciation and efficiency. Part II (4 chapters) covers regulation by court and commissions, the income tax, valuations, and land in valuations. Part III (7 chapters) takes up the methods of depreciation, the straight line method, the reducing balance method, the sinking fund method, the annuity method, the equal annual payment method, and the unit cost method.

The author's general view of depreciation is expressed most clearly in the following passages: The "loss of value, whether tangible or intangible in form, resulting from physical decay, or from obsolescence or inadequacy, which indicate functional decay, is known as depreciation" (p. 22). "Depreciation charges are adjustments made at the end of a period to remedy discrepancies between book accounts and the things whose values they indicate" (p. 49). "Two different things should be done, viz.: (1) write down book values to actual values, carrying the amount written off to the Profit and Loss account, and (2) provide funds to re-

place the assets when worn out" (p. 50). The effect of these provisions is that "the reserve for depreciation indicates the extent to which at any time the composite depreciation of the entire plant has progressed" (p. 47).

The author's view as thus expressed is clearly that the function of depreciation accounting is to adjust book values to real values in the business, but he does not consistently hold to that view. On pages 21 and 22 he states "good accounting is based upon the distinction between capital and revenue. The integrity of all investment rests upon this principle. Unless it is adhered to, investment and income are obscurely merged. As a result capital is frittered away as dividends and the financial foundations of the company are weakened." These are excellent sentiments, but as to clear-cut fundamental ideas, would the author use "investment," "capital," and "value" as synonymous terms? In discussing the depreciation reserve, he speaks of it as *replacement* reserve, and the idea emerges that the function of depreciation is to provide funds for the replacement of plant (pp. 26, 99). Certainly providing for the decline in plant value and providing for replacement of existing plant are not the same thing, though, of course, in certain cases they may be.

Other inconsistencies appear, if the author's purpose is really to show actual values. He is unwilling to write up the book figures when there has been an increase in unit prices of plant, or an advance in real estate values, or when there is good-will due to large earning power of the business. Further, if he intends to show the value of individual plant units, he suggests the wrong method of calculating depreciation. While he emphasizes that the method employed should be determined by the special circumstances of the case, yet he clearly implies that he prefers the straight line or the reducing balance method, and that he fundamentally objects to the sinking fund method.¹ The straight line method writes down plant cost in equal annual amounts during the life of the plant; the reducing balance method writes off diminishing portions; the sinking fund method provides for increasing portions. While it might seem that the sinking fund method would make inadequate allowance for depreciation during the early life

¹ The annuity and equal annual payment methods are really the same and are in turn equivalent to the sinking fund method. This fact seems not to have been observed by the author. See the reviewer's discussion of the sinking fund and equal annual payment method (*Journal of Accountancy*, August, 1915).

of the plant and would make the burden too heavy in the later years, yet, if we seek actual value, then in so far as book items may be adjusted to real values, it presents the facts more accurately than any other method. If we were to assume a large, free market for second-hand plant, we should find that unit values diminish in increasing proportion with age. This is due to the fact that at every point the value of a unit would be equal to the discounted net future earnings that it represents; thus the decline in value would augment from year to year. This fact appears clearly in the valuation of bond premiums.

The question may be raised whether the accepted practice in depreciation accounting, even if not directly admitted in discussion, is anything more than a *method of distributing recurring plant costs to the operating account of the business*? Does the author really mean to show actual unit values? Ideally, of course, it appears attractive to base depreciation on values and thus really keep "capital" intact. Practically, however, such procedure would be difficult to carry out, and it is questionable whether it would serve as good a purpose as the mere distribution of costs. Of course, the procedure adopted must depend on what one wishes to show. The primary purpose, however, is usually to show costs—actual investment and actual expense of operation—and therefore the basis of depreciation charges should be cost. This view is usually followed, and in public utility accounting it would seem to be dictated by desirable public policy. In unregulated business, however, adjustments might well be made to indicate also the actual values in the concern.

The author has attempted too much in the compass of his little book, and consequently has presented an inadequate treatment of much of his subject-matter. This criticism appears particularly true of his classification of hydro-electric plant, his survey of English income tax decisions, his review of American court decisions on depreciation, and more especially of his discussion on valuation.

JOHN BAUER.

Cornell University.

Business Economics. By ERNEST L. BOGART. (Chicago: La Salle Extension University. 1915. Pp. viii, 268.)

The word economics usually implies a treatise covering at least the fundamentals of economic science. One would therefore expect to find in this textbook—for it is professedly a textbook—

the accepted principles of economics applied to business in the narrower and more technical sense of commercial activities. An examination of the context discloses, however, that this kind of business is absolutely ignored and that only two of the nineteen chapters contain any considerable amount of economic theory. The lack of any reference to commercial undertakings is the more surprising when it is noted that this book is for use in a business administration course, other texts being on business psychology, business law, advertising, retail merchandising, credits and collections, personal efficiency, applied salesmanship, sales administration, etc.

A more appropriate title for the book would have been "Descriptive Economics," for it consists essentially of an enumeration and description of economic resources, institutions, organizations, and functions with particular reference to the United States. The most satisfactory portions are those which deal with concrete things, as, for example the agricultural resources of the United States (ch. 2) and the mineral resources of the United States (ch. 3). On the other hand, treatment of such subjects as speculation and crises (ch. 6), labor organizations (ch. 8), unemployment and insurance (ch. 9), and money and banking (ch. 13) is decidedly inadequate and unsatisfactory. The defects arise largely from too great condensation and the attempt to include both description and analysis, with some estimate of advantages and disadvantages, in a space insufficient for either alone. For example, ten pages are devoted to money and banking and the following topics are covered: "credit economy, value of money, rising and falling prices, bimetallism, government paper money, kinds of money in the United States, the function of credit, banks, elasticity of currency, the federal reserve system, asset currency, and savings banks."

The greater part of the book suffers from this excessive condensation. Over 200 important topics are covered in 262 pages of text. The space has not always been well distributed or wisely used, but even if it had been it would have been inadequate for a satisfactory treatment. The author has been obliged to deal largely in generalizations and more or less dogmatic assertions. One most flagrant example must suffice as an illustration. On page 144 the following comprises all that is said about the systems of two countries that were pioneers in the field of social insurance:

Germany was the first country to introduce the principle of compulsory accident insurance in 1884. Employers are then organized into associations and sections and are compelled to bear the expense of granting compensation to injured workmen, which compensation amounts to about two-thirds of their average wages. In 1897 England, by the passage of the workmen's compensation act, adopted the principle "that a workman is entitled for all accidents of occupation to a moderate and reasonable compensation."

Nothing that precedes or follows this quoted passage gives a clear idea of what a system of compensation or social insurance really is. The same criticism applies to other topics.

The book contains some excellent chapters and is on the whole well written. It is unfortunate that the author did not confine himself to a narrower range of topics or was not allowed more ample space.

CARROLL W. DOTEN.

Massachusetts Institute of Technology.

Scientific Management. A History and Criticism. By HORACE BOOKWALTER DRURY. Columbia University Studies in History, Economics, and Public Law, Vol. LXV, No. 2. (New York: Longmans, Green and Company. 1915. Pp. 222. \$1.75.)

Industrial Organization and Management. By HUGO DIEMER. (Chicago: LaSalle Extension University. 1915. Pp. 284.)

Written from the economist's point of view, Mr. Drury's book is an objective analysis of scientific management in the endeavor to trace its inception and growth and to discover its place in the general economic progress of society. The genesis of scientific management is found in systems of wage payment—Mr. F. W. Taylor himself once referred to his system as a piece-rate system; and it is inferred that scientific management is an outcrop from economic conditions arising out of the Industrial Revolution. The author discusses different wage systems and profit-sharing plans, and shows why scientific management had to grow from a payment system into a science which includes other phases than wage payment. There are also included biographical sketches of the leaders in the movement, giving their contributions to its development.

While the criticism indicates that the author has had no extensive first-hand experience in management, it is objective, impartial, and interesting. It analyzes scientific management and studies the

effect of each of its different phases on manufacturing as if it were an assemblage of efficiency devices. This method of treatment, however, is dangerous unless the reader keeps clearly in mind that scientific management—as Mr. H. L. Gantt puts it—is not a bag of tricks, from which a trick is to be taken whenever a need for improvement is discerned.

The author believes that the greatest gain from scientific management is in minimizing friction and waste; that the set task and incentive bring about an increase in individual productivity of perhaps 100 per cent; and that there is an increase of from 30 to 40 per cent by proper planning of work. The discussion of the effect on the worker's mind of providing him with detailed instructions is interesting and valuable. The hackneyed objection to intensive individual coaching is disposed of by saying—quite correctly—that there is in reality little of it. The author concludes that the productivity of the general reorganization brought about by scientific management equals the sum of the productivities of all the other phases because it is an integration of them. He tries to evaluate this productivity but finds it impracticable to do so.

It is held that scientific management will be a strong influence toward concentration and large-scale production, but that its growth does not represent another industrial revolution, as has been claimed; that it promotes the division of labor, but is not the cause thereof. Scientific management is regarded as a part of the general progress of industrialism, which will merge with other systems and lose its identity. If the author refers to any particular *system* of scientific management, his statement may go unchallenged, but as scientific management differs from other management in that it is based on the knowledge of facts instead of opinion it is difficult to see how it can lose its identity.

In considering the labor problem, Mr. Drury points out that the gulf between organized labor and scientific management is caused principally by the labor union policy of restriction of output. He admits that harmony appears in plants where scientific management has been introduced, but, granting harmony and co-operation in production, on the whole he can not say that scientific management makes it possible to get away from the application of the theory of wages and collective bargaining. He believes that the division of the surplus, as contemplated under scientific management, is not in itself scientific, but is in the last analysis based on

collective bargaining; and shows that those who are working under scientific management are in favor of it—that agitation against it is due to the leaders of organized labor. Mr. Drury thinks coöperation between scientific management and organized labor possible through collective bargaining. The reviewer knows that it was suggested to Mr. Taylor that coöperation be established, on the basis of the preferential shop; but that Mr. Taylor's viewpoint was that there could be no coöperation until the leaders of organized labor should see the economic error of the policy of restricting output.

The author concludes that it is not safe to abide in the hope of altruism on the part of factory managers; that finally there must be recourse to collective bargaining, and a recognition of the different relations of the employer and the worker to the profits of business.

Mr. Diemer's *Industrial Organization and Management* is a textbook, evidently prepared for the college student, as it covers a broad field, including organization, plant, purchasing, storekeeping, operating, cost-keeping, accounting, etc. The treatment given each phase is necessarily brief. The book is well illustrated with photographs, typical forms, etc., and each chapter is followed by test questions for use in discovering the student's grasp of the material presented in that chapter.

Lack of space prevents an exhaustive exposition of principles and reasons for all the statements made, but still the book is not dogmatic; the author rather assumes general agreement with his conclusions, presenting them for absorption by the student. The result should be the development in the student of an admirable viewpoint.

It is apparent that the author favors scientific management and the Taylor system in particular. He deals sharply with critics of scientific management, particularly with those whose criticisms are superficial and not based on careful thought. There is a clear presentation of the elemental principles of scientific management and a description of the operation of the Taylor system.

There is a very interesting presentation of the fact that science has no motives, which leaves it to be inferred that scientific management is not, in itself, a panacea for the ills of industrialism, but in the hands of the honest, "square" employer is a most valuable tool for the work of increasing productivity and efficiency. The chapter on time study is an excellent introduction to the

subject, bringing out clearly the relation of time study to scientific management as a whole.

To the author's discussion of the use of the suggestion box, the reviewer would add that on the whole it is not particularly productive of improvements. But very few workmen, comparatively speaking, make or can make good suggestions without a bit of prodding and help from the management, and even when these incentives are provided, experience indicates but small result, unless suggestions are well paid for. There is considerable difficulty in arriving at the proper payment for suggestions, because it is not infrequently difficult to determine how much of the value of the suggestion is really ascribable to the workman's own ideas and thought, and how much is due to the work done on it by the management.

To the discussion of reports for executives, the reviewer would add that in at least one factory it has been found by careful trial that a report which is not of direct interest to at least three members of the organization is superfluous and unnecessary. This rule is, of course, to a certain extent, empirical, but is based on experience, and has been found valuable where applied.

The author presents a discussion of the qualifications of men, based on a thorough study made by himself, which all executives might read with profit to themselves, particularly if read in connection with Mr. Frederick Winslow Taylor's writings on the subject.

FREDERIC G. COBURN.

NEW BOOKS

ARNOLD, H. L. and FAUROTE, F. L. *Ford methods and the Ford shops.* (New York: Engg. Mag. Co. 1915. Pp. x, 440. \$5.)

A technical account of mechanical processes descriptive of methods of technical and factory organization. Chapters deal with Mr. Ford's personality, factory methods of employment, the relation of Mr. Ford to labor, and practices in safeguarding workmen. The book is lavishly illustrated.

BANKS, E. *Correct business and legal forms. A reference manual for stenographers, secretaries, and reporters.* (Washington: John Byrne & Co. 1915. Pp. 270. \$1.25.)

BAUGH, F. H. *Principles and practice of cost accounting.* (Baltimore: F. H. Baugh. 1915. Pp. xi, 194. \$3.)

BELDING, A. G. *Key to accounts and accounting practice.* (New York: Am. Bk. Co. 1915. Pp. 123. 50c.)

BLANTON, B. H. *Credit. Its principles and practice.* (New York: Ronald Press. 1915. Pp. xi, 319.)

Mr. Blanton has gathered together and presented in logical order, and in non-technical language, the various functions of the credit department, including collection procedure, and the qualifications required in the man whose work it is to preside over this important department of business. The subject is discussed almost wholly from the viewpoint of the wholesaler, only one chapter being devoted to bank credit. An appendix contains the text of the national bankruptcy act.

In his description of the interchange of ledger experience, the author rightly emphasizes the value of this source of credit information, though he fails to mention the drawbacks and difficulties experienced in the operation of a system based upon clearing. It is readily seen that where the number of participating members is large, the burden placed upon such members in answering inquiries quickly becomes onerous. This, in fact, is the weakest point in the system which the author commends and which he identifies with a certain agency employing the interchange of ledger experience methods. The comparison which the author makes between this agency and the two old and well-known commercial agencies, Dun and Bradstreet, is rather unfavorable to them and not wholly fair in that it is made to appear as though they did not include trade investigations in their system of credit investigation.

The usefulness of the work would unquestionably have been increased if, for the sake of the novice in credit management, the author had given more space to the analysis of credit reports including a fuller discussion of the credit seeker's financial statement.

LEE GALLOWAY.

BOLTON, R. P. *Power for profit. Principles governing the use of machinery and labor in modern buildings.* (New York: The DeVinne Press. 1915. Pp. 209.)

BROAKER, F. *The American accountants' manual, vol. I. Examination questions prepared by the state board of examiners of expert public accountants appointed by the board of regents of the University of the State of New York . . . together with answers in concise form, further elucidated by author's commentaries upon the technique and expression of modern accountancy.* (New York: F. Broaker. 1915. Pp. xlv, 210.)

CLAY, P. *Sound investing.* (New York: Moody Mag. & Bk. Co. 1915. \$2.)

CODY, S. *How to deal with human nature in business; a practical book on doing business by correspondence, advertising, and salesmanship.* (New York: Funk & Wagnalls. 1915. Pp. xx, 488. \$2.)

DELBRIDGE, C. L. *Delbridge wholesaler's calculator; 1/8th of 1c to 5c, by eighths; showing the value of any number of pounds, yards, gallons, bushels, work-hours, pieces, or other units from 1 to 200,000 with equivalents at top of page, per hundred and per ton.* (St. Louis: Delbridge Co. 1915. Pp. 44. \$5.)

- DE WEESE, T. A. *Keeping a dollar at work; fifty "talks" on newspaper advertising.* (New York: Evening Post. 1915. Pp. 176. \$1.)
- DURFEE, E. N., editor. *Cases on the law of mortgages, selected and annotated.* (Indianapolis: Bobbs-Merrill. 1915. Pp. xi, 531. \$4.)
- EDELMAN, P. E. *Inventions and patents.* (New York: Van Nostrand. 1915. Pp. 288. \$1.50.)
- EDELMAN, E. *Investment bonds and tax exemption laws.* (New York: McAuliffe & Booth. 1915. Pp. 75. \$5.)
- FISHER, J. I. *Fisher's instalments at simple interest and amortization tables.* (Louisville, Ky.: John I. Fisher Pub. Co. 1915. Pp. 48. \$5.)
- FISKE, A. K. *Honest business. Right conduct for organizations of capital and of labour.* (New York: Putnam. 1914. Pp. vii, 333. \$1.25.)

The titles of some of the 23 chapters will indicate the nature of the contents: "The use of money and credit," "Socialism no remedy for inequity," "Making government more efficient," "The dreadful waste of war," "Ethics and religion in business." The general idea seems to be that education, in one form or another, is the surest avenue by which we can get honest business. A. B. W.

- GERSTENBERG, C. W. *Materials of corporation finance.* (New York: Prentice-Hall. 1914. Pp. xxii, 1008.)

More than 100 selections are contained in this convenient and comprehensive collection. Somewhat roughly, they cover the following topics: kinds of business associations; organization, stocks, bonds, and mortgages; state control of corporate securities; sale of securities; prospectuses; Wall Street; promotion; intercorporate relations; financial management; and reorganizations. The material consists largely of original documents, such as acts, charters, stock exchange rules, dealers' circulars, prospectuses, annual reports, and syndicate agreements. The selections generally relate to legitimate financial operations and do not, as has been done in many a treatise, present too exclusively the pathological side of high finance. Least satisfactory are the selections dealing with Wall Street, which consist mainly of rather poorly chosen descriptions of speculative operations.

An adequate appraisal of such a book can come only after trying it out on a class. But a general criticism may be made that too much emphasis has been placed on form and too little on financial policy. Thus the sinking fund provisions found in certain mortgages are given in full but there are no documents bearing on the actual administration of a sinking fund, or on the advisability of a sinking fund as compared with direct serial payments. Such neglect of problems of financial policy is characteristic of the book.

In so large a collection some attention might well have been paid to the law and custom in European countries. Writers on corporation

finance have been too prone to make generalizations based on observation limited to present-day American practice. A comparative study is of real value to one who wishes to escape a provincial view of corporation finance. But there is no reference to foreign practice in the entire collection.

HENRY RAND HATFIELD.

GOWIN, E. B. *The executive and his control of men. A study in personal efficiency.* (New York: Macmillan. 1915. Pp. xv, 349. \$1.50.)

HANUS, J. J. *Ginners' rapid calculator and guide to correct figuring of amount of seed, its value, the charge for tolls on picked cotton, lint cotton and burr or bolly cotton.* (Dallas, Tex.: Dorsey Co. 1915. Pp. 133. \$5.)

HARVEY, R. S. and BRADFORD, E. W. *A manual of the Federal Trade Commission.* (Washington: John Byrne & Co. 1916. Pp. 500. \$5.)

HESS, H. W. *Productive advertising.* (Philadelphia: Lippincott. 1915. Pp. xv, 358, illus. \$2.50.)

HOTCHKIN, W. R. *The manual of successful storekeeping.* (Garden City, N. Y.: Doubleday, Page. 1915. \$10.)

HOXIE, R. F. *Scientific management and labor.* (New York: Appleton. 1915. Pp. 302. \$1.50.)

To be reviewed.

KETCHUM, E. S., editor. *The traffic library. Pt. II. Classification of property, application of principles.* (Chicago: American Commerce Assoc. 1915. Pp. xviii, 323.)

LAPP, J. A. and MOTE, C. H. *Learning to earn. A plea and a plan for vocational education.* (Indianapolis: Bobbs-Merrill. 1915. Pp. 421. \$1.50.)

LOCKWOOD, J. H. *The creation of wealth; modern efficiency methods analyzed and applied.* New edition. (Indianapolis: Bobbs-Merrill. 1915. Pp. 225. \$1.)

MICHIE, T. J., editor. *A treatise on the law of carriers.* (Charlottesville, Va.: Michie Co. 1915. 4 vols. \$26.)

MONTGOMERY, R. H. *Auditing: theory and practice.* New edition. (New York: Ronald Press. Pp. 900. \$5.)

Material on the income tax occupies 100 pages. It is arranged in the order of making up returns required by the Treasury Department and is thoroughly indexed. Defects of the present law are explained. Obligations of individuals and corporations and also allowable deductions are taken up in detail with reference to the latest rulings.

MORSE, P. & Co. *Interest tables.* (New York: Perley Morse & Co. 1915. Pp. 29. 50c.)

NEWHALL, G. *The distribution of estates of deceased persons in*

- Massachusetts. Second edition. (Boston: G. A. Jackson. 1915. 25c.)
- NYSTROM, P. H. *Economics of retailing*. (New York: Ronald Press. 1915. Pp. 407. \$2.)
- PAGE, E. T. *Advertisement-writing, theoretical and practical*. (Chicago: Page-Davis Co. 1915. Pp. 252. 50c.)
- PAGE, E. D. *Trade morals: their origin, growth and province*. (New Haven: Yale Univ. Press. 1914. Pp. xv, 287. \$1.50.)
- The publishers call this book "a careful study of the philosophy of trade"; the author calls it "an impressionistic picture of the evolution of the social structure, of its standards of conduct, of the development of business, by which its exchanges are made and which like the lifeblood, courses from group to group supplying subsistence, strength, the means of growth and satisfaction to each of the interests arising from the great motive forces of hunger, love, vanity, fear, and pity." To the reviewer it appears an array of generalities—ethnological, anthropological, socio-psychological, metaphysical.
- A. B. W.
- RICHARDS, W. H. *Power in advertising*. (Kansas City, Mo.: Empire Press. 1915. Pp. 274. \$2.)
- RICHARDSON, W. P. *Rowe's commercial law*. (Baltimore: H. M. Rowe Co. 1915. Pp. xxi, 349.)
- RITTENHOUSE, C. F. *Elements of accounts*. (Boston: A. D. MacLachlan. 1915. Pp. 115. \$1.65.)
- ROLLINS, M. *Present worth tables; carried to nine places of decimals; rates as follows: 1 per cent, 1 1/4, 1 1/2, etc., up to 6 per cent; then 6, 7, 8, and 10 per cent*. (Boston: Finan. Pub. Co. 1915. \$1.)
- SCOTT, W. R. *Scientific circulation management for newspapers*. (New York: Ronald Press. 1915. Pp. xvi, 310. \$2.)
- SCOVELL, C. H. & Co. *Unearned burden in paper mills, measuring the loss from curtailed production*. (Boston: C. H. Scovell & Co. 1915.)
- SHIVELY, N. O. *Salesmanship*. (San Francisco: Shively Service Bureau. 1915. 4 vols. \$12.)
- SLIPPY, J. C. *Telephone appraisal practice*. (Pittsburgh, Pa.: J. C. Slippy. 1915. Pp. vii, 97. \$4.)
- SMITH, J. R. *The elements of industrial management*. (Philadelphia: Lippincott. 1915. Pp. 291. \$2.)
- To be reviewed.
- STEARNS, A. A. *The law of suretyship, covering personal suretyship, commercial guaranties, suretyship as related to bonds to secure private obligations, official and judicial bonds, surety companies*. Second edition. (Cincinnati: W. H. Anderson Co. 1915. Pp. xiv, 722. \$6.)

Custom house guide: 1915-1916; location of general order stores and warehouses, steamship lines and piers, cargo districts, legal rates of storage; directory of departments, etc. Thirty-third edition. (New York: H. D. Chapman, 14 Reade St. Pp. 320. \$1.)

Fundamental investment principles. (Chicago: Investors Pub. Co. 1915. \$2.)

How to chart your business. (Chicago: Chart Stationery Co., 1015 Monroe Bldg. 1915.)

Lectures in the forum in industrial journalism at New York University, season of 1915, under the auspices of the New York Trade Press Association. (New York: Advertising & Selling Mag. 1915. Pp. 130. \$1.)

The library of factory management. Vol. III. *Materials and supplies.* Vol. V. *Operation and costs.* Vol. VI. *Executive control.* (Chicago: A. W. Shaw Co. 1915. \$3 each.)

Mechanics' lien laws of Minnesota, Iowa, North Dakota, South Dakota, with explanatory remarks and suggestions. (Minneapolis: Northwestern Lumbermen's Assoc. 1915. Pp. 44.)

Pennsylvania tax free bonds, classified. Seventh edition. (Philadelphia: Barclay, Moore & Co. Oct., 1915. Pp. 44.)

Zellers-Meyer interest calculator, maturity calculator and year calendar. (Hooper, Nebr.: The Zellers-Meyer Co. 1915. Pp. 27. 50c.)

Capital and Capitalistic Organization

The Trust Problem. By EDWARD DANA DURAND. (Cambridge: Harvard University Press. 1915. Pp. 145.)

The Anti-Trust Act and the Supreme Court. By WILLIAM HOWARD TAFT. (New York: Harper and Brothers. 1914. Pp. 133. \$1.25.)

Trusts and Competition. By JOHN FRANKLIN CROWELL. (Chicago: A. C. McClurg and Company. 1915. Pp. 191. \$0.50.)

Of these three contributions to the literature of the trust problem, the first two deal with the relationship of the government to the trusts, while the third is a general discussion in condensed form of industrial monopolies. Dr. Durand's book—the outgrowth of a series of lectures originally given before the students of Harvard University—is easily the most far-reaching as well as the most philosophic discussion of the questions connected with government regulation of trusts that has appeared in recent years. For this task the author possessed unusual qualifications. His training as an economist gave him the necessary intellectual equipment to analyze the problem into its constituent parts. His experience in

the Bureau of Corporations furnished him with a body of facts sufficiently broad and significant to illuminate his analysis with concrete illustrations and to prevent him from falling into the errors so common with the less well informed.

Dealing only with industrial consolidations with monopolistic power, Dr. Durand sees but three possible methods of procedure; first, the prevention of unfair competition and the withdrawal of special privileges; second, the regulation of prices and profits; and, third, the destruction of existing trusts and the prevention of the formation of any such organizations in the future. The first method, so ably presented and advanced by Professor J. B. Clark, the author believes may be used as an adjunct of either of the other two, but is distrustful of its efficacy when used alone. He is convinced that industrial monopolies are both possible and probable, even under a régime where neither special privileges nor unfair competition exist. The policy of regulating prices or profits he holds would very probably end in government ownership. The merits of government ownership Dr. Durand does not discuss; but, as he points out, such an outcome is necessarily a product of the future, and meanwhile, until such a result should be reached, the dangers and difficulties attendant upon a program of price regulation would be in full operation. As a result of these and other considerations, the author concludes that destruction of existing trusts and the prevention of prospective consolidations is the only solution of the question that merits serious attention. Both of these desiderata are, in his judgment, entirely feasible. The appendix contains all of the federal anti-trust acts. There is no index, an omission that is somewhat pardonable on account of the essential unity of the discussion as a whole.

The principal object of Mr. Taft's argument is to show that the recent decisions of the Supreme Court have transformed the Sherman anti-trust act into a statute in complete harmony with the historic principles of the common law and consequently into an administrative and judicial weapon sufficiently comprehensive and adequate to answer all the requirements that may be demanded of it in furnishing a complete solution of the problems connected with industrial monopolies. The first chapters are devoted to a short but enlightening presentation of the principles of the common law relating to individual rights of property, contract, and labor. A second section of the book deals with the narrowing effect of the Sugar Trust decision, and the unfortunate interpretation given the act in

the railway traffic cases. A third section reviews the decisions in the Standard Oil and Tobacco cases, and holds that as a result of the promulgation of the "rule of reason" the statute has again been brought into conformity with the original principles of the common law. The author is a firm believer in the efficacy of the procedure in equity as a method of enforcing the anti-trust laws and furthermore contends that serious dangers would result from the use of the drastic methods so often advocated. The case for the Sherman act as interpreted by the decisions of the Supreme Court during the period 1910 to 1914 is presented with a full knowledge of the legal principles involved and a cogency that must command the attention of every student of the question, whether he be an economist, a statesman, or a lawyer. Nevertheless, it is to be observed, the author's conclusions are at direct variance with those reached by Dr. Durand.

The third book is an analysis of the trust régime, rather than a constructive program for the control of industrial consolidations. It is therefore broader in its scope, aiming to present in brief but logical form the issues involved in "big business" and "to induce straighter thinking and sharper discrimination in the consideration of public questions." It is not philosophical, like Durand's; it is not legal, like Taft's; it is analytical and informatory. As one would expect from an editor of the *Wall Street Journal*, the author sees in the great combinations a natural, logical evolution, but at the same time the inequitable practices and dangerous tendencies that naturally attend their development. On the whole one must conclude that Dr. Crowell, unlike Dr. Durand, is inclined to believe that the elimination of special privileges and unfair practices would prove a fairly workable program. Unlike Mr. Taft, however, the author is a firm believer in the desirability of supplementing the judicial control exercised through the Supreme Court by administrative control through the Federal Trade Commission.

While it is always easier to criticise than to construct, attention may properly be called to certain faults and discrepancies, such as attributing to trusts a dominant position in certain fields of service (p. 2) and later affirming that these organizations derive their power to exploit the market from their charters or from contracts with competitors (p. 66). In crediting to the New Jersey anti-trust law of 1913 the most elaborate definition of the trust, the author is in one sense strictly accurate; and yet in justice he should have directed attention to the fourteen states that have

adopted substantially the same definition, and especially acknowledgment should have been given to the Texas statute of 1889, the progenitor of the definition to which Dr. Crowell refers. On the whole, however, the book is an accurate portrayal of facts and tendencies; and, considering the narrow compass into which the subject is compressed, a worthy addition to the National Social Science Series.

MAURICE H. ROBINSON,

University of Illinois.

Voting Trusts. A Chapter in Recent Corporate History. By HARRY A. CUSHING. (New York: The Macmillan Company. 1915. Pp. 226. \$1.50.)

This is a scientific study of a single aspect of modern corporation finance. As such it is thorough, balanced, and, within its limits, exhaustive. The value of the study is its painstaking review of the great body of historical and current facts bearing on the subject and the judicial poise of the author's judgments. There are no hot-headed generalizations so common in studies dealing with the border-lands between business and public policy.

A voting trust arises when all or a majority of the stock of a corporation is assigned to a small group of men for a period of years or until dividends on the stock have been declared or until some other clearly defined event has transpired. During the period the trustees of the stock manage the corporation. In case dividends are declared they pass these over to the real owners. The fundamental purpose—a purpose which Mr. Cushing does not emphasize sufficiently—is to give to a corporation a responsible and publicly acknowledged administration. As this end is most needful at a time of financial wreck, the voting trust has been used, in the vast majority of cases, during the period immediately following reorganization. At such times, as Cushing succinctly states, this insures stability of policy and responsible management, and prevents disturbing interference by minority stockholders (p. 98). Except in very rare cases voting trustees have not abused their power and in many cases—notably that of Northern Pacific Railway—the voting trustees have voluntarily surrendered their trust as soon as they felt the property had so far recovered as to be beyond the reaches of speculative raids.

The author includes a long chapter on the legality of voting trusts, but this does not leave the reader with a very clear idea of the situation. He lays altogether too much emphasis on the un-

usual trend of judicial opinion in North Carolina and is perhaps too apt to quote the leading but ambiguous opinions in *Warren v. Pim* as a basis of the New Jersey law. As a whole, he seems to agree that voting trusts are becoming recognized by the courts as legitimate means of registering the will of the majority and are not in opposition to the common law doctrine regarding restraint of trade; and he notes that two states, New York and Maryland, have, in fact, enacted statutes under which voting trusts may be created.

As noted before, the book is a permanent contribution to a scientific study of corporation finance. Because of its general excellence it is a pity that the style is not better. Throughout, the author fails to differentiate between the significant and the exceptional. The plan of the forest is lost in the multitude of trees. At one time he follows the chronological order of development, then switches, even within the same paragraph, to the logical order. Even when stating a sequence of historical facts (pp. 4-10) he moves forward and backward in most perplexing fashion. His chapters lack unity—particularly the one dealing with the Law of Voting Trusts. A prefatory chapter stating clearly the development of the voting trusts from the days of the Central Vermont and the first reorganization of the New York and Erie to present forms, such as the Buffalo and Susquehanna Railroad Corporation, would have added greatly to the value of the work from the point of view of constructive scholarship.

The sober, judicial, and balanced point of view and manner of expression is in sharp contrast to the flamboyant generalizations so frequently met with. Mr. Cushing finds "that the substantial advantages which voting trusts have produced certainly outweigh any criticisms to which they have been subjected." Yet contrast the unsupported dictum of Samuel Untermyer (*A Legislative Program*, p. 25): "They [the voting trusts] have been impressively imposed by large interests upon a prostrate defenseless property in course of reorganization when the interests were scattered, unable to protect themselves." Or, again, in the report of the so-called Pujo Committee, which received, because published by the sanction of Congress, a widespread hearing. Few branches of economic study are more prone to unenlightened and mischievous misrepresentations than corporation finance, and all serious students of the subject have been placed under deep obligation to Mr. Cushing for his painstaking study.

ARTHUR S. DEWING.

Yale College.

NEW BOOKS

BROWN, W. J. *The prevention and control of monopolies.* (New York: Dutton. 1915. Pp. xix, 198. \$2.25.)
To be reviewed.

COUSE, H. A. *Organization and management of business corporations in Ohio.* (Cincinnati: W. H. Anderson Co. 1915. Pp. 327. \$3.50.)

CURTIS, E. N. *Manual of the Sherman law. A digest of the law under the federal anti-trust acts.* (New York: Baker, Voorhis. 1915. Pp. xliii, 383. \$3.50.)

Mr. Curtis' manual is a handy volume which may be slipped in the pocket and which provides ready reference for judicial authority or expressions of opinion upon points of law in the federal anti-trust acts. It is probably the best handbook that we have at present. In many respects it resembles closely Mr. W. W. Thornton's extensive treatise on the Sherman act which appeared in 1913. Inasmuch as the great proportion of legal decisions on trusts have been under the Sherman act rather than under other acts, the ground which is covered by the two treatises is not greatly dissimilar. The chief value of Mr. Curtis' treatment lies in its brevity. At the same time it is decidedly comprehensive in character, being divided into 20 chapters containing 667 sections. In addition it contains an appendix giving the text of the acts together with an index of close upon 50 pages.

W. H. S. STEVENS.

DARLING, J. R. *Darling on trusts.* (New York: Neale Pub. Co. 1915. Pp. 258. \$1.50.)

The volume by Mr. Darling, formerly a special agent of the Department of Justice, derives its value from its extensive appendixes (pp. 61-258), for the text (pp. 13-60) is brief and inadequate in its treatment of the topics selected. Space is found for a description of the duties of the Department of Justice, for "brief remarks on combinations in other countries," and for discussions of the Sherman law, patents, amalgamations, effect of the tariff upon the trusts, and several other matters. In the appendixes are printed: the anti-trust laws of the United States; the much less common "court procedure applicable to trust legislation" promulgated by Justice Hughes in 1912; a list of cases instituted by the United States under the Sherman anti-trust law; and a list of cases decided under the Sherman law or related thereto.

H. R. T.

ORTH, S. P., editor. *Readings on the relation of government to property and industry.* (Boston: Ginn. 1915. Pp. 664. \$2.25.)

This is a valuable collection of hitherto scattered materials upon a subject which has been demanding increased attention. Standard law journals have been drawn upon more frequently than any other source but care has been exercised to exclude articles of a too highly technical nature. The readings are grouped under nine headings. Commencing with several selections upon the "changing conceptions of property and the functions of government," a second section is de-

voted to the discussion of the "responsiveness of legislatures and courts to the newer demands," and a third to the police power. A large part of the volume is occupied by selections treating of the relation of corporations to the government. The general section on corporations deals with the problems of corporate abuses, the proposal for uniform legislation, federal control, monopolies, and, finally, public utilities. This last is directly connected with the following section which takes up in a series of articles the various aspects of regulation of public utilities by boards and commissions. The selections upon labor fall into three groups—labor laws, employers' liability and workmen's compensation, and labor unions. Several articles upon federal control of commerce and industry together with excerpts from senate committee testimony relative to the amendment of laws regulating corporations, and a reprint of Clayton and Federal Trade Commission acts, conclude the volume.

H. R. TOSDAL.

THOMPSON, S. D. *Commentaries on the law of corporations of Seymour D. Thompson and Joseph W. Thompson*. Vol. VIII. (Indianapolis: Bobbs-Merrill. 1915. Pp. 911. \$6.50.)

Compilation of laws of the state governing railroads, grain warehouses, express, telephone, telegraph, gas, light, heat and power companies, storage warehouses and commission merchants, together with the rules adopted by the Board of Railroad Commissioners relating to public utilities; defining the powers and duties of the board. (Bismarck, N. Dak.: Board of Railroad Commissioners. 1915. Pp. 156.)

Facts on municipal ownership in 268 American towns and cities. (Chicago: Public Service Pub. Co. 1915.)

Labor and Labor Organizations

NEW BOOKS

BULKLEY, M. E. *Minimum rates in the boxmaking industry*. Studies in the minimum wage, no. 3. (London: Bell. 1915. 1s. 6d.)

COLE, G. D. H. *Labour in war time*. (London: Bell. 1915. Pp. viii, 316. 2s. 6d.)

The aim of this book is to give a brief account of the manner in which the war has affected English labor and of the industrial problem to which it has given rise. The author maintains as a general principle that it is the duty of labor during a war which threatens the national security to come to the country's aid. The workers must not take advantage of the situation to attack capitalism, as was advised by the Internationalist Socialist Congress of 1907, since to do so would be to hamper the nation in the conduct of war. On the other hand, labor must see to it that the *status quo* is maintained between labor and capital. Accordingly, it must resist all attempts to weaken the position of the laborer. In the light of this principle,

the author discusses the action of the English government with reference to unemployment, the relief of distress, cost of living, wage movements, the organization of industry, woman and child labor. The book closes with the passage of the Munitions Act. At almost every point the government is criticised for giving too little consideration to the rightful claims of labor. But despite its strongly partisan tone, the book is far the best which has appeared on the subject.

G. E. B.
HEDGES, A. C. *Wage worth of school training; an analytical study of six hundred women-workers in textile factories.* (New York: Teachers College, Columbia Univ. 1915. Pp. xvi, 173. \$2.)

HENRY, A. *The trade union woman.* (New York: Appleton. 1915. Pp. xxiv, 314, illus. \$1.50.)

An admirable popular account of one of the most fundamental problems connected with the employment of women is given in this book. Because of her long connection with the National Women's Trade Union League and her experience as editor of *Life and Labor*, the official "organ" of the women's trade union movement in the United States, the author has unusual qualifications for the writing of such a book. It contains a brief historical account of the relation of women to early trade unions, which is based on the material in volume X of the *Report on the Condition of Woman and Child Wage-Earners in the United States*, and Miss Henry does well to point out the need of research relating to the recent developments of the women's trade union movement. There are chapters dealing with the Women's Trade Union League, the woman organizer, and trade union ideals and policies, which discuss questions relating to trade union organization, such as the relative merits of men and women organizers, and the relative advantages of "mixed" locals and separate locals for men and women. A good deal of space is devoted to the large strikes in which women's unions and other women's organizations have figured so prominently in the last decade, but instead of an analysis of causes and results the discussion is confined rather to the conduct of the strike, newspaper publicity, the winning over of a neutral or hostile public opinion, methods of caring for the strikers' families and picketing by leisure-class women. Other chapters deal with more general subjects, women and vocations, the working woman and marriage, etc.

EDITH ABBOTT.

HOXIE, R. F. *Scientific management and labor.* (New York: Appleton. 1915. Pp. x, 802. \$1.50.)

To be reviewed.

HUSBAND, J. *America at work.* (Boston: Houghton Mifflin. 1915. Pp. 111. \$1.)

KAUFMANN, H. *Die Frauenarbeit in der schweizerischen Industrie.* Zürcher volkswirtschaftliche Studien, 11. (Zurich: Rascher. 1915. Pp. 119.)

LAYTON, W. T. *The relations of capital and labour.* The nation's

library, no. 10. (London: Collins Clear-Type Press. 1914. Pp. 264. 1s.)

Though well meant, this is not a very original or illuminating book. It is intended to clear up the labor problem or, as the author puts it, to discover "terms on which both employers and employees may be reasonably asked to give willing service to the community." The author's conclusions are based entirely upon the permanency of our present industrial system, modified slightly to secure a somewhat more equitable distribution of incomes. He arrives at the conclusion that "fair wages" are "what the industry will bear." They should be not so low as to sustain inefficient businesses, but not so high as to "drive capital and enterprise out of the business." The state and municipalities should pay high wages, but must guard against "an insidious form of inefficiency," which arises when men are secure in their positions and advance is more or less automatic. The state regulation of wages is found to be "difficult" in our complex industries of today, but for certain classes of workers it is quite possible and even desirable to limit by law the right to buy labor in the cheapest market. In preparing an industrial policy, the author discovers that "the present lag in wages" (in England before the war) is due to a lack of capital resulting from a restriction of saving, which process is hastened by inheritance taxes, which take away capital and spend it as income. The author favors greater publicity in business, stricter regulation of the finances of corporations, better education for wage-earners, the state enforcement of minimum or standard conditions, investigation of labor disputes, and in general "the equalizing of opportunities."

WALTER E. WEYL.

LUDWIG, J. *Die wirtschaftliche und soziale Lage der Wanderarbeiter im Grossherzogtum Baden*. (Karlsruhe: G. Braun. 1915. Pp. viii, 186.)

SEARS, W. L. *Administration of public employment bureaus*. (New York: Adams & Grace Co. 1915. Pp. 15. 10c.)

WOLMAN, L. *The boycott in American trade unions*. Johns Hopkins studies in historical and political science, series XXIV, no. 1. (Baltimore: Johns Hopkins Press. 1916. Pp. vii, 148.)

To be reviewed.

ZIMMERMANN, W. *Der Krieg und die deutsche Arbeiterschaft*. (Jena: Fischer. 1915. 2 M.)

Industrial fatigue. Interim report of an investigation of industrial fatigue by physiological methods. (London: King. 1915. 5d.)

Industrial home work in Massachusetts. By the DEPARTMENT OF RESEARCH, WOMEN'S EDUCATIONAL AND INDUSTRIAL UNION, Boston. Prepared under the joint direction of the MASSACHUSETTS BUREAU OF STATISTICS and AMY HEWES. (Boston: Women's Educational and Industrial Union. 1915. Pp. xxxi, 191. 80c.)

The labour year book. Issued under the auspices of the parliamentary committee of the Trades Union Congress, the executive committee of the Labour Party, the Fabian Research Department. (London: Fabian Bookshop. 1915.)

New York state labor law, the industrial code, the workmen's compensation law; with amendments, additions and annotations to July 1, 1915. (Albany: Dept. Labor. 1915. Pp. 280.)

Money, Prices, Credit, and Banking

Lower Living Cost in Cities. A Constructive Programme for Urban Efficiency. By CLYDE LYNDON KING. National Municipal League Series. (New York: D. Appleton and Company. 1915. Pp. viii, 355. \$1.50.)

On its face, this book commends itself to a casual reader. It constitutes the fifth volume of the National Municipal League Series, and is impressively introduced by the editor of the series. The book comprises an introduction, three parts, and an index. Part II, the most valuable part of the book, is devoted to Urban Costs of Living that are attributed chiefly to inadequate and ineffective methods of distribution, particularly at terminal points. Part III deals with Other Urban Living Costs, *e.g.*, waste in productivity from preventable disease, lowered vitality from lack of playgrounds, bad housing, ill-ordered and unpractical public schools, ill-regulated and extortionate public utilities, inequitable taxation, and inefficient city government. The remedies urged for these more remote and somewhat disputable factors are largely counsels of perfection.

Persons seeking information regarding the archaic and wasteful methods which indubitably obtain in the production and distribution of perishable food-stuffs destined for the ultimate consumer of small quantities, will find the book suggestive; but critical students and responsible city officials may well hesitate to accept the engaging "constructive programs" which make up fully one fifth of the text.

Dr. King has much to say about the twentieth century city as contrasted with the nineteenth century village. Still, that city "is urban only in its raw industrialism," he says. Just what differentiates cities from villages is not disclosed. He quotes the report of the census of 1910 to show that "one in every two (55.1 per cent) lives in incorporated villages, towns and cities" (*sic*); and then says, "We are clearly a nation of city dwellers." The statement is based on a forced and inflated figure, *viz.*, 55.1 per cent,

given in a paragraph of interpretative text found on page 59 of the *Abstract* of the census of 1910. The paragraph follows a table which sets forth that 46.3 per cent of the population of the United States were found in "Urban territory"; and 57.3 in "Rural territory," of which 8.1 millions or 8.8 per cent of the national population were found in over 11,000 places of less than 2500 inhabitants. The writer of the paragraph has thrust urbanity upon 8.8 per cent of the people of the country in order to make it appear that 55.1 per cent of the total population "were living under conditions more or less urban!" Neither the census scribbler nor Dr. King deigns to define those conditions, or to note that places having 2500 inhabitants are called urban by the Thirteenth Census; whereas throughout the nineteenth century no place that had less than 8000 inhabitants was accounted urban.

Dr. King tells us that "we are now living in masses and not, as in the nineteenth century, on isolated farms," but does not give us an inkling as to the mean size of these masses. The last census shows that almost one half of the urban masses (48.8 per cent) did not muster 5000 people! The massiveness of the twentieth century city seems hardly so portentous as our author would have us believe.

In 1800 there were but 2 cities with 30,000 or more inhabitants. They contained 1.9 per cent of the total population of the country. By 1900 there were 135 of them with 25.1 per cent; but in 1850 they numbered 24 and contained 8.7 per cent of the country's population. By 1870, cities of 30,000 or more numbered 44, and contained 5.2 millions, or 13.5 per cent of the national. The assumption that isolated farms in the nineteenth century harbored the bulk of population seems rather far-fetched. At any rate, it appears that the tendency to live in masses had already declared itself in the middle of the bucolic nineteenth century.

Of 195 cities of 30,000, in 1912, 183 received their first charters in the nineteenth century, 10 in the eighteenth, and 2 in the seventeenth. Of the 183, 65 had already received their charters by 1849. The largest number so incorporated in a decade was 46, in the decade 1850-1859; and the next largest number was 28, in the decade 1830-1839. In the five years 1850-1854 there were 30 cities newly established. In other words, 107 cities, or 54.8 per cent of the 195 that belonged to the 30,000 and upwards class in 1912, had assumed city government before 1855.

Dr. King declares that "the average urban dweller spends prac-

tically one-half his income for food. Living costs mean therefore primarily food costs." This statement appears to be based upon the following:

Professor Chapin found that a family with an income of from \$900 to \$1,000 per year, spent at least 45 per cent of its income for food. It is therefore safe to say that half the workers upon whom the twentieth century city depends for prosperity, spend half of their income for food.

Analysis of Chapin's findings as to the proportion of income spent for food by 391 families in New York City shows that in only two of his ten income classes did the food bill exceed 45 per cent of the income, and that in five classes, it was under 44 per cent. In view of the analyses of some thousands of family budgets set forth in two important reports which appear to have been overlooked by Dr. King, namely, *Report of the Massachusetts Commission on the Cost of Living, 1910*, and *Cost of Living in American Towns—Report of an Inquiry by the Board of Trade in London*, made in 1909, published in 1911, it is clear that 45 per cent is a high estimate. Neither of the studies mentioned bears out Dr. King's chosen figure of 45 per cent as the average amount of the food bill.

The Board of Trade's tables embody the analyses of 7,716 budgets, covering ten racial groups with eight income classes in each group. The total number of average per cents of food bill to total income, numbers 70. In 6 cases, the figure is 45; in 14 cases, it exceeds 45; but in only 4 cases does it exceed 50; while in 50 cases or 71 per cent of the average per cents given, the average per cent is below 45.

Dr. King contributes (p. 19) an interesting table, summarizing the results of an investigation made by him in 1912, showing the prices received by the producers, middlemen, and retailers of farmers' products shipped into Philadelphia from outlying counties. The table covers 13 items, and shows the per cents of increase in prices charged consumers over prices paid to producers. In 13 instances they range from 67 to 266. These per cents appear to be correctly computed. But the author's statement that "the average per cent of increase is 136" appears to be incorrect. The table contains no statement of absolute figures on which to base an average, and 136—the average given—seems to have been arrived at by dividing the sum of 13 per cents of increase by 13!

Indeed it must be said that the author's ideas as to the nature

of an average and of per cents of increase appear to be hazy. Thus (p. 23) it is stated that the cost to consumer for a sack of onions was \$2.50 against \$1.10 received by the farmer, "an increase of 136 per cent." That per cent is manifestly nine points too high. On page 22, Dr. King states that there was "an average increase from 210 to 272 per cent for distribution costs alone," in the marketing of Wisconsin cheese in 1913. Computing per cents of increase on the prices set forth in the text, it appears that the per cents of increase were 110.5 and 172.7 respectively. It is only fair to say that the context does not enable one to say who made the errors.

EDWARD M. HARTWELL.

Boston, Massachusetts.

Theory of Coöperative Credit. Including a Brief Sketch of the Credit System. By H. HEMANTAKUMAR GHOSH. (Calcutta: S. C. Auddy and Company; London: Kegan Paul, Trench, Trubner and Company. 1915. Pp. xii, 212, xlv. 4s.)

A smaller treatment of this subject was issued in 1914, prepared primarily for the use of professors, students, and readers of economics. The additions consist mainly of an attempt to show the position of modern coöperative credit in relation to the larger commercial and industrial credit system. For this purpose a brief sketch of the system is given in chapter 9, which is entitled Credit in Evolution. Together with the two preceding chapters on The Indian Joint Village and Coöperative Credit in India, this forms a very valuable part of the book for American economists.

According to the author, from ancient times down to the Middle Ages credit was utilized principally for purposes of consumption. With the extension of exchange in modern times, credit has widened its sphere to purposes of production. In the latter sense credit is based on confidence in which there is some measure of security and some of risk, and "this confidence arises principally from the solvency, integrity and efficiency of the debtor."

In dealing with coöperative credit, which forms the main subject study, the author confines his attention largely to the European short-time personal coöperative credit societies as organized by Raiffeisen and Schulze-Delitzsch in Germany and by Luzzatti in Italy, but more particularly as these societies relate to agriculture. As distinct from business credit, the author aims to show that agricultural coöperative credit has a moral rather than a material basis. He says:

Raiffeisen well understood that confidence in credit arose not merely from material resources, but to a considerable extent from a moral basis, and that the latter should be made up of honesty, truthfulness, fidelity towards promises, and self-sacrifice. These ethical principles, therefore, were to be among the crude materials from which he desired to manufacture his type of credit.

But these ethical principles are no more pronounced in coöperative credit than they are in commercial credit. The evidence produced by the author tends to show emphatically that agricultural coöperative credit rests on material security. In the record of facts presented in the appendix (pp. i-xli), after a thorough discussion of the author's theory of the moral basis of coöperative credit, it is said of the Raiffeisen societies in Germany that "most of the members possess some material property" (p. vi); of the Schulze-Delitzsch societies in Germany that "credit may only be granted to members of the society, and then only to such extent as the personal credit of the member seeking it and the security furnished permit" (p. xxi); and of the Luzzatti popular banks in Italy that they are able to attract capital because of their moral and material guarantees (p. xxv). Moreover, the cardinal principle of "unlimited liability" as made compulsory by law in Germany would have no significance apart from material security by which the small landowners pledge all their chattels and land for the debts of the society. The same is true of the Luzzatti people's banks in Italy, which adopted the principle of "limited liability," by which the material liability of members is made definite. While in a few instances small loans are made to very poor but honest members of people's banks without material security or endorsers, the practice is very limited in Germany, Italy, France, or any other country where personal coöperative credit societies are extensively organized.

Even the feature of "gratuitous service" which the author emphasizes as indicating a moral basis in coöperative credit, because implying a spirit of self-sacrifice not known in individual or commercial credit, is practically not gratuitous service at all. While for many of the duties performed by members of Raiffeisen coöperative credit societies there is no direct compensation in salaries or wages, there is indirect compensation for every member in the form of reduced interest rates on loans and cheaper prices for farm necessities purchased coöperatively. This is not so much self-sacrifice as self-interest in which all the members share as a result of coöperative effort.

It is difficult to see, therefore, how coöperative credit differs in final analysis from commercial forms of credit, notwithstanding the efforts of the author to maintain his moral-basis theory of coöperative credit.

The book is printed with marginal notes, which are an aid to the reader in the absence of an index. Too many typographical errors, however, mar the otherwise good printing of the volume. The book could be greatly improved if the statistical data were brought many years nearer to date, as could readily be done.

JAMES B. MORMAN.

Kensington, Md.

Die Bank von England mit besonderer Berücksichtigung der Reservefrage und der Entwertung der englischen Rente. By O. HULFTEGGER. (Zürich: Art. Institut Orell Füssli. 1915. Pp. xiii, 423. 8 M.)

Beginning with a brief historical introduction, this volume gives an unbiased account of the Bank of England in relation to national and international credit. As the title indicates, much emphasis is placed upon the questions of reserve and the fall in the price of consols during the last fifteen years. In successive chapters are considered: the issue department, the banking department, reserve, the place of the reserve in the national and international credit systems, and the national debt. An appendix contains statistics and important dates in the history of the bank.

The author, at one time a student at the University of Zürich and later at the London School of Economics, has given his readers much that is important and interesting, but little that is new. Although he has taken his cue from such authorities as Andréadès, Bagehot, Withers, and Palgrave, he has drawn upon a wide range of sources. His main reliance, however, has been upon publications of our own National Monetary Commission, English banking journals, and the utterances of English bankers and publicists.

As to the question of reserve referred to above, Dr. Hulftegger, writing during a time of peace, takes the unusual position that the English banking reserve is not inadequate. He avers that if a larger reserve were to be maintained it would, in the event of war, be seized by the government—a procedure that would be unfair to the bank as compared with other interests. The contention that the reserve is adequate is inconsistent, however, with his own reminder that the entire English credit structure rests on the note

reserve of the Bank of England, *i.e.*, that Peel's act started a limitless credit system upon a limited reserve. It is fortunate that, in this connection, numerous plans of banking reform are given, most of which hinge upon provision of a larger reserve.

The large measure of dependence of the English credit system upon the consols, and the flood of light which the author throws on their depreciation, coupled with his proposals for raising their price, make the last chapter, on the national debt, a contribution that is both pertinent and noteworthy. The fall in the price of consols since 1900 is traceable to several circumstances. The costly Boer War found the country poorly prepared in a military and financial way. The widely spread British interests might be touched by any event and the tense political atmosphere has also been unfavorable to the price of consols. Various "Trustee Acts" have extended the range of "ward" securities at the expense of consols. Contrary to an act of 1870, consols have been made subject to the income tax and death duties. Moreover, the Irish loans have trenched upon their market. The low money rates from 1892-1897 made the postal savings banks more attractive, resulting in heavy purchases of consols to cover the increased deposits. These purchases raised the price to an abnormally high level, a reaction from which was certain with the coming of a high rate of interest.

The author's remedial proposals are, briefly: abolish the provisions of the income tax applying to consols, raise the rate to 3 per cent, issue them in small denominations for the sake of a wider market, and fix a time of redemption.

This work, which may be regarded as a snapshot picture taken under peaceful conditions, is, we are promised, to become the author's point of departure for a further study of the same subject.

CHESTER A. PHILLIPS.

Dartmouth College.

NEW BOOKS

- VON ALTROCK, W. *Der landwirtschaftliche Kredit in Preussen. II. Kur- und Neumärkisches Ritterschaftliches Kreditinstitut und neues brandenburgisches Kreditinstitut.* (Berlin: Parey. 1915. Pp. 308. 8 M.)
- BARRICK, C. W. *Rural land credits.* (New Martinsville, W. Va.: Wetzel Democrat Pub. Co. 1915. Pp. 11. 10c.)
- CROSBY, J. T. *Latin-American monetary systems and exchange conditions.* (New York: National City Bank. 1915. Pp. 31.)

D., L. S. *The A.B.C. of banking.* (Taunton, Eng.: Barnicott & Pearce. 1915.)

DAVIS, A. McF. *Certain old Chinese notes.* Proceedings of the American Academy of Arts and Sciences, vol. 50, no. 11. (Boston: The Academy, 28 Newbury St. 1915. Pp. 41.)

EVESQUE, M. *Le moratorium des dépôts en banque et des comptes courants.* (Paris: Alcan. 1915.)

FRANKLIN, F. *Cost of living.* (Garden City, N. Y.: Doubleday Page. 1915. Pp. 162. \$1.)
To be reviewed.

HERSCHENZ, P. *Die Haftung der Reichsbank für ihre Organe.* (Halle: C. A. Kaemmerer & Co. 1915. Pp. 76.)

JASTROW, J. *Geld und Kredit im Kriege.* (Jena: Fischer. 1915. Pp. vi, 97. 2.80 M.)

KEESING, L. *Geld, Bankreserven und Bankausweise in den Vereinigten Staaten nach dem Inkrafttreten des "Federal reserve act."* (Berlin: Guttentag. 1915. Pp. 30. 1 M.)

KNIFFIN, W. H., JR. *The practical work of a bank.* (New York: The Bankers Pub. Co. 1915. Pp. vii, 621. \$5.)

The best work so far published on the subject of practical banking. Organization and bookkeeping have not been allowed to overshadow other equally vital and far more difficult topics. More than 100 pages are devoted to the subject of credit analysis and a prominent place is given to cost accounting. The book is largely a product of the educational work of the American Institute of Banking, liberal use having been made of papers prepared by various members of that organization.
O. M. W. S.

MACGREGOR, T. D. *The book on thrift; why and how to save and what to do with your savings.* (New York: Funk & Wagnalls. 1915. Pp. xi, 349, illus. \$1.)

PLAUT, T. *Der Einfluss des Krieges auf den Londoner Geldmarkt.* (Jena: Fischer. 1915. 2 M.)

SHEPPARD, M. *Rural credits. Speech by Senator Morris Sheppard before Texas farmers congress, August 3, 1915.* (Texarkana: Four States Press. 1915. Pp. 32.)

SONNE, H. C. *The city. Its finance, July, 1914, to July, 1915, and future.* (London: Effingham Wilson. 1915. Pp. 308. 5s.)

SPALDING, W. F. *Foreign exchange and foreign bills in theory and in practice.* (London: Pitman. Pp. xii, 215. 5s.)
To be reviewed.

STUMPF, A., editor. *The bankers' encyclopedia. Forty-second edition.* (New York: Bankers Encyclopedia Co. 1915. Pp. 2335. \$8.)

WALL, W. W. *The war and our financial fabric.* (London: Chapman and Hall. 1915. Pp. xviii, 224.)

WILLIS, H. P. *The federal reserve*. (New York: Doubleday Page. 1915. Pp. xiii, 342. \$1.)
To be reviewed.

California bank act, 1915. (San Francisco: California Bankers' Association. 1915. Pp. 163. 60c.)

Report on the cost of living for an unskilled laborer's family in New York City. (New York: Board of Estimate and Apportionment. 1915. Pp. 57.)

Trust companies of the United States, 1915. (New York: United States Mortgage & Trust Co. 1915. Pp. 530.)

A continuation of this standard annual containing balance sheets of 1770 companies, giving names of officers and quotations of stock and dividends during the past year.

La question du crédit à l'exportation: L'état actuel du crédit à l'exportation en France. Son organisation possible. (Paris: Giard & Brière. 1915. 2.25fr.)

Public Finance, Taxation, and Tariff

The Exemption of Improvements from Taxation in Canada and the United States. By ROBERT MURRAY HAIG. A Report Prepared for the Committee on Taxation of the City of New York. (New York. 1915. Pp. 291.)

Some Probable Effects of the Exemption of Improvements from Taxation in the City of New York. By ROBERT MURRAY HAIG. A Report Prepared for the Committee on Taxation of the City of New York. (New York. 1915. Pp. 254.)

The Taxation of Land Values. By LOUIS F. POST. (Indianapolis: Bobbs-Merrill Company. 1915. Pp. 179. \$1.00.)

Two factors have contributed largely to the revival of interest in the single tax question which has taken place in the last six or seven years. The first was the establishment, early in 1909, of the Joseph Fels Fund endowment "to put the single tax into effect somewhere in the United States within five years." The second has been single tax advertisement of the claim that western Canada's remarkable development during the period from 1908 to 1912-13 was due to the fact that long strides toward the single tax had been taken in that section. In recent single tax agitations in the United States no argument or assertion has been more prominent than that "the single tax" brought unprecedented prosperity to the Canadian West. Because the claims of ardent propagandists have been so commonly of the *post hoc ergo propter hoc* sort, opponents of exemption of improvements had their innings

when the tide of prosperity receded and the recent depression, which has severely affected western Canada, set in. They urged that the system, by overstimulating building activity, had paved the way for a particularly serious period of economic stagnancy.

Dr. Haig's report to the Mayor's Committee on Taxation of New York City on *The Exemption of Improvements from Taxation in Canada and the United States* presents the results of his field investigations carried on during the summer of 1914, and is particularly timely. Part I (pp. 11-258) is "an effort to state concisely all the available facts which may aid in understanding the system of taxation in force in the various cities or throw light upon its effects." Part II (pp. 261-280) bears the title "Generalizations and Conclusions."

In the United States the movement for the exemption of improvements has made but little progress. Exemption is now legally being applied only in Pittsburgh and Scranton, in which cities the rate of tax upon buildings is 80 per cent of that upon land in 1916 and will gradually be reduced to 50 per cent by 1925. Tax Commissioner Pastoriza's extra-legal partial-exemption-of-buildings plan in Houston, Texas, was forbidden by the courts in March, 1915, and since the report under review has appeared Pueblo, Colorado, has repealed (November, 1915) the law providing for a 99 per cent exemption of improvements beginning with the 1915 levy. But in the three western provinces of Canada hardly a municipality does not tax improvements at a lower rate than land, and many, including the cities of Vancouver, Victoria, and Edmonton, exempt them entirely; there are also special provincial land taxes. Dr. Haig has collected full data regarding the fiscal systems of the municipalities and provinces, together with such data as are available for "gauging the effects of the system" and the status of public opinion.

Dr. Haig finds it impossible "to make positive statements as to the relative effects upon general prosperity in the various cities" (p. 277). "The cities are normally irregular because of conditions other than those connected with their tax systems," and possess "exclusive characteristics of greater importance than their tax systems" (p. 264). Nevertheless some conclusions may be arrived at. Exemption, although "not the primary cause of building activity" (p. 270), has stimulated it; indeed, professional real estate operators have been strong for "single tax" because "they are eager to encourage anything which promises to assist in in-

creasing land values and nothing seems to be more effective for this purpose than the rapid construction of buildings" (pp. 275-276). In the larger cities tax rates have been so low that land values have not been prevented from increasing tremendously and land speculation has been hindered but little. But in some of the smaller towns where rates have been high speculation was "utterly destroyed" (p. 274). The land taxes have not been adequate revenue producers under all circumstances; in some Alberta towns there has been so little land value that rates as high as $8\frac{1}{2}$ per cent were found necessary (p. 142), with over-assessment of land as the only alternative. Dr. Haig puts forward guardedly the conclusion that "the tax system tends to encourage economy in the use of land" and "increased congestion per acre," but "so far as buildings are made cheaper because of the reduced carrying charge, the exemption of improvements undoubtedly operates to reduce congestion per room" (p. 273). Probably the system has encouraged home ownership. There is little experience of value as to the effect upon rents. It is significant that the experiments in western Canada "have been confined to young cities" (p. 280). Finally, there are indications in some places, notably Vancouver, of a reaction in favor of taxing buildings (pp. 39, 104-107, 220).

Dr. Haig's problem in his second report is to determine, from an analysis of the New York City assessment rolls for 1914, "which sections of the city, which types of property and which economic classes would pay greater taxes and which smaller" were land to be taxed at a higher rate than buildings. Whether a taxpayer's bill would increase or decrease in the case of a given piece of property depends upon the relation of land value to building value, the ratio of land value to building value being 65.94:34.06 for Manhattan and 61.47:38.53 for the entire city (p. 15).

Two proposals for exemption are considered: the taxing of buildings (1) at a rate half that upon land, and (2) at a rate one per cent of that upon land. In 1914 the levies upon land and improvements, respectively, were 84 and 52.8 millions; had the first plan been in effect they would have been 104.1 and 32.8 millions, and under the second plan they would have been 135.9 and .8 millions (p. 24). Under the first plan in Manhattan the tax burden would increase from 92.4 to 94.7 millions; the tax rate upon land from 1.78 to 2.20; and the tax burden upon land from 57 to 70.5 millions. Under the second plan the tax burden would total 98.3 millions, 91.9 millions of this from land, and the rate upon land

would be 2.86 (pp. 22, 26-27). Under either plan Brooklyn would gain a large reduction, and only the presence of much vacant land would prevent substantial decreases in the relative burdens of the other boroughs. All the calculations are subject to the assumption that land values would remain constant, neither diminished by heavier taxes nor increased by the growth of the city or by forces which the change itself would set in motion. The total tax bills of the following types of property would be reduced: skyscrapers, up-town tenements and apartment houses in Manhattan, and homes and apartments generally in the out-lying sections. The following types would receive increases: down-town tenements and most single-family houses in Manhattan, and, of course, vacant and poorly improved land in all sections. In Manhattan, every assessment section south of 96th street would receive a substantial increase.

Dr. Haig concludes, first, that "the change promises ultimate benefits of considerable importance to all tenants and to many of the home-owners in the out-lying boroughs," which benefits, however, "may be very slow of realization"; and, second, that "the owners of land would be charged with the cost of these benefits," which cost would be "considerable" (p. 135).

Dr. Haig has carefully analyzed his data, and both of his studies are useful contributions. They represent industrious and painstaking work. A stylistic blemish which detracts from the force of many sentences is the excessive use of the passive voice.

The author of *The Taxation of Land Values* was among the first to accept the doctrines of Henry George and for many years was intimately associated with him. For more than thirty years he has been an active advocate of the single tax and he speaks with authority. Mr. Post's book is the fifth edition, but little revised, of a work which, since its first publication in 1894, has been known as one of the strongest statements of the single tax case. Mr. Post does not beg the question as do so many single taxers by appealing to the sanction of alleged "natural rights"; he undertakes to justify the single tax proposal on grounds of social utility, (1) as a tax reform, and (2) as an industrial reform.

The book is divided into three parts of which the first (pp. 1-53) presents compactly the general argument. Pages 54-81 contain "Answers to Typical Questions" concerning the single tax. The "Explanatory and Illustrative Notes," which occupy more than half of the book (pp. 85-179), contain much of the most important

material. To have incorporated a considerable part of these notes with the argument proper, or better to have retained the notes as footnotes (as in editions before the fourth) would have been desirable for many reasons.

ARTHUR N. YOUNG.

Princeton University.

The Canadian Iron and Steel Industry. A Study in the Economic History of a Protected Industry. By W. J. A. DONALD. (Boston: Houghton Mifflin Company. 1915. Pp. xv, 376. \$2.00.)

Dr. Donald's book, one of the prize essays in the Hart, Schaffner and Marx series, is an elaborate and complete account of the history of the Canadian iron and steel industry, with particular reference to the influence on it of protection by tariff duties and by bounties. The book is full of detail, and shows an intimate acquaintance with the facts of the situation and the literature bearing upon it, and in particular shows that the author knows how to make profitable use of the technical and commercial literature. It is abundantly fortified by statistical tables in the appendix. If any criticism can be made on this score, it is that the book is almost too full. Some details might have been spared; in these days of unceasing multitudes of books, one wishes that every writer would put his conclusions in the smallest compass consistent with clear exposition and satisfactory proof.

The book is a history not of Canada's tariffs, but chiefly of the duties and bounties upon iron and steel which have been in effect since the first steps toward the "national system" were taken in 1879. The characteristic element in Canada's protective system has been the use of bounties as well as of import duties. Indeed, I know of no modern instance in which bounties have been used on so considerable a scale; perhaps the only comparable case is that of the present French bounties on raw silk and other agricultural products. The protective duties, which began with the act of 1879, were supplemented by bounties for the first time in 1884. The bounties started on a comparatively modest scale and remained modest until 1897; in later years the system was greatly enlarged. At first limited to pig iron made from Canadian ore, it was extended to iron from foreign ore as well as that from domestic ore ("foreign ore" includes that from Newfoundland), to bar iron, steel, steel rails, and other manufactures of steel. The beginning

of the end came in 1906, when the bounties, while continued for some years on a decreasing scale, were made to cease by 1912.

The cause of the adoption of the system seems to have been purely political. The Liberals, pledged in 1897 to a downward revision of duties, nevertheless could not forfeit the support of the manufacturers and the producing localities, and resorted to the bounties as a means of holding the persons interested without alienating the restive western constituencies. And it is in political conditions again that one finds the explanation of the abolition of bounties. The strong feeling against them in the growing West made their retention hopeless. One general proposition often advanced in the books on the protective controversy is substantiated by Canada's experience: bounties have a less tenacious hold than protective duties. The latter may continue indefinitely, and indeed seem to have a stronger hold the longer they persist. But bounties are always on the defensive. The direct payment of money out of the treasury needs always to be justified. The opposition to bounties is continuous, and apparently cumulative; sooner or later they go. Those who advocate protection on the grounds of the young industries argument—that is, with the expectation that the protection is not to be permanently maintained—will find in Canada's experience good reason for preferring bounties to duties.

With regard to the effects of this combination of duties and bounties, Dr. Donald's general conclusion is not such as to strengthen the case for protection to young industries. He intimates pretty clearly that in his opinion much the same growth would have taken place even in the absence of protection. As relating to the one enterprise about which this phase of the protective controversy has most centered in Canada, namely, the Dominion Iron and Steel Company, he adduces strong evidence to show that the company would have gone on in any case, bounties or no bounties. He also intimates that the bounty system postponed progress and lessened efficiency, or at all events that the cessation of bounties was followed by greater progress and greater efficiency. The case on this score does not seem to me conclusively made out; but it does seem clear that no adoption of improved methods can be traced to the protective or the bounty system. Altogether, Dr. Donald's volume is a valuable and interesting contribution to the literature upon protection. We need precisely such investigation as is contained in this volume: detailed, intelligent, and unbiased.

F. W. TAUSSIG.

Harvard University.

NEW BOOKS

- BROWNE, H. J. *Assessment and taxation in the District of Columbia and the fiscal relation to the federal government.* (Washington: Carnahan Press. 1915. Pp. 71. 25c.)
- COMBAT, F. J. *Les finances publiques et la guerre, 1914-1915.* (Paris: Berger-Levrault. 1915. Pp. 104. 1.25 fr.)
- CHRYSTIE, T. L. *The law and practice of inheritance taxation in the state of New York. Supplement, 1914-1915.* (New York: Banks Law Pub. Co. 1914; 1915. Pp. xxix, 890; 223.)
- DIEHL, K. *Zur Frage eines Zollbündnisses zwischen Deutschland und Oesterreich-Ungarn.* (Jena: Fischer. 1915. Pp. 50. 1.50 M.)
- FUISTING, B. *Die preussischen direkten Steuern. Vol. I. Kommentar zum Einkommensteuergesetz.* (Berlin: Heymann. 1915. Pp. 812. 18 M.)
- HAUSER, F. *Die Reichs-Finanzreform und die Probleme der Reform des schweizerischen Bundeshaushalts.* (Zürich: Buchh. des Schweiz. Grütlivereins. 1915. Pp. xi, 148. 2.50 M.)
- HELFFERICH, K. *Kriegsfinanzen: Reichstagsrede am 10 März 1915.* (Stuttgart: Deutsche Verlagsanstalt. 1915. Pp. 56. 1 M.)
- HOFFMANN, A. *Die Kommunalbesteuerung in Italien.* (Jena: Fischer. 1915. 5 M.)
- LACHAPELLE, G. *Nos finances pendant la guerre.* (Paris: Colin. 1915.)
- LAWSON, W. R. *British war finance, 1914-1915.* (London: Constable. 1915. 6s.)
- DE MAURO, G. *Il reddito dominicale ordinario nella scienza e nel diritto finanziario Italiano.* (Torino: Soc. Tip. Ed. Nazionale. 1915. Pp. xvi, 126.)
- MEAD, E. S. *Corporation finance.* Revised edition. (New York: Appleton. 1915. \$2.)
- PLEHN, C. C. *Government finance in the United States.* (Chicago: McClurg. 1915. Pp. 166. 50c.)
- STRUTZ, G. *Einkommensteuerepflicht und Einkommensteueranlagung im Kriege.* (Berlin: Springer. 1915. Pp. 75.)
- UGLOW, W. L. *A study of methods of mine valuation and assessment. Methods of assessing for taxation. Wisconsin zinc mines.* (Madison: Wisconsin Geol. & Nat. Hist. Survey. 1915. Pp. 67.)
- The Anglo-French loan, conditions necessitating a foreign credit and its effect on our commerce.* (Boston: National Shawmut Bank. 1915. Pp. 14.)
- Constitutional provisions, legal enactments and court decisions determining New York City's debt within the debt limit, and also state-*

ment of the constitutional debt-incurring power of the city as of June 1, 1915. (New York: Dept. Finance. 1915. Pp. 8.)

Public budgets. (Philadelphia: Am. Acad. Pol. & Soc. Sci. Nov., 1915. Pp. 324. \$1.)

Report of the tax conference at the University of Oklahoma, Dec. 8 and 9, 1914. (Norman, Okla.: University of Oklahoma. 1915. Pp. 123.)

Population and Migration

The Scandinavian Element in the United States. By KENDRIC CHARLES BABCOCK. University of Illinois Studies in the Social Sciences, Vol. III, No. 3. (Urbana: University of Illinois. 1914. Pp. 223. \$1.15.)

This is a valuable contribution to immigration literature. The first six chapters, upon the early progress of Scandinavian immigration, partake too much of the antiquarian interest of the papers read before local historical societies, but they bring out the early trials and difficulties of the immigrant and contrast vividly the economic conditions in Europe with the opportunities in the unsettled American Northwest.

The surprising amount of activity on the part of the northwestern railroads and of the state governments of Wisconsin, Minnesota, etc., during the sixties and seventies, to attract Scandinavian immigrants is well described. So is the land hunger of the Norwegian, to describe to whom in his native country "land which was neither rocky, nor swampy, nor pure sand, nor set up at an angle of forty-five degrees, and which could be had for the asking . . . was to speak to his imagination rather than to his understanding." The author does not think that the immigrant has been an unfair competitor with the American for the land. He has simply been more willing to live the hard life of the pioneer. Nevertheless, it is admitted that "if the agricultural land of the vast West be looked upon as a national asset, to be held for cautious and discriminating distribution to examined and approved settlers, then it may be that the foreigner has occupied land which might sometime have fallen to a better man." The chapter on religious influences is extremely suggestive of the part religious prejudice may play in retarding the assimilation even of races of the Old Immigration. The two chapters on political matters are still more enlightening with regard to the role nationality is today playing in our local and state politics. Dean Babcock's estimate of the significance of this matter is indicated by the following:

It would be hard to suggest a more dangerous or disrupting experiment . . . than to attempt to "recognize" the various alien factors in complex public affairs. . . . Nothing would do more, for example, to develop the latent religious and racial antipathies between the Scandinavians and the Irish. The fundamental assumption, therefore, which lies back of all claims for "recognition" of Swedish-Americans or other hyphenated Americans, as such, savors of ward politics and the machine, rather than of political equity or right, and just so far as it does this it menaces social and political safety.

In view of the light the present war has thrown upon the realities and unrealities of assimilation these generalizations acquire considerable significance. In a final brief contrast between the north, and the south and east Europeans, as to assimilability, the author makes another pertinent observation: "Furthermore, no great and permanent causes centering in Europe continually demand their active and intense sympathy and financial aid, knitting them closely together, as in the case of the Irish or the Russians" [*i.e.*, Russian Jews?]. But why single out the Irish and the Hebrews? And haven't we read somewhere within a few months of the formation of a nationalistic Scandinavian association to encourage solidarity of language and culture? Nevertheless, Dean Babcock has succeeded admirably in maintaining a substantially unbiased and scientific attitude. As he says, "too much stress should never be laid on the character of any one group of immigrants, lest it warp the judgment upon the immigration movement as a factor in American progress."

The monograph closes with a critical essay on materials and authorities. The whole work is based upon prolonged study of sources.

A. B. WOLFE.

University of Texas.

NEW BOOKS

BEHR-PINNOW. *Statistische Beiträge für die Beurteilung der Säuglingssterblichkeit in Preussen unter Benutzung von amtlichen Material.* (Charlottenburg: Verlag des Kaiserin-Auguste-Victoria-Hauses zur Bekämpfung der Säuglingssterblichkeit im Deutschen Reiche. 1915.)

CHERVIN, A. *L'Autriche et la Hongrie de demain. Les différentes nationalités d'après les langues parlées.* (Paris: Berger-Levrault. 1915.)

LEMANCZYK, A. *Die Geburtenfrequenz in der vorwiegend katholischen und den vorwiegend protestantischen Teilen Preussens und ihre Entwicklung.* (Munich: Duncker & Humblot. 1915.)

- MILLS, R. C. *The colonization of Australia (1829-42). The Wakefield experiment in empire building.* London School of Economics. Studies in economics and political science, no. 44. (London: Sidgwick & Jackson. 1915. Pp. xx, 363. 10s. 6d.)
- ROTT. *Die Einwirkung des Krieges auf die Säuglingssterblichkeit und die Säuglingsschutzbewegung.* (Berlin: Stülke. 1915. Pp. 44. 1.20 M.)
- SZERER, M. *Studien zur Bevölkerungslehre Polens.* (Vienna: Hermann Goldschmiedt. 1915. Pp. 57. 0.50 M.)
- Intercollegiate debates and bibliographies on a literary test for immigrants and a six-year presidential term.* (Austin, Tex.: University of Texas. 1914. Pp. 60.)
- Maternal morality in connection with child-bearing and its relation to infant mortality. Supplement to the forty-fourth annual report of the Local Government Board.* (London: Wyman. 1915. 8d.)
- Population and vital statistics.* Bulletin No. 32. Commonwealth demography, 1914, and previous years. (Melbourne, Australia: Bureau of Census and Statistics. 1915. Pp. 272.)

Social Problems and Reforms

- Citizens in Industry.* By CHARLES RICHMOND HENDERSON. The Social Betterment Series, edited by SHAILER MATHEWS. (New York and London: D. Appleton and Company. 1915. Pp. xviii, 341. \$1.50.)

Here is a work intended frankly for employers of men; and as the product of the late Professor Henderson it is in keeping with the recent tendency for educational and business groups to get together in working out industrial problems. As a number of the Social Betterment Series, which, in the language of its editor, Professor Shailer, "aims at listing our social assets," our social liabilities having been given more than full publicity, the volume is not disappointing. Rarely ever before have "the masters of men" been told so clearly from the university chair that they have the whole situation in their own hands, to do with as they will, and been commended so loudly for present accomplishment. On the other hand, almost never before, in this connection, has a friendly analysis of the Great Industry, with its inevitable trend towards industrial democracy and of the obligations of the men on the ground to accelerate rather than retard this movement, been made for the employer, and in such readable manner.

The work falls into two natural divisions: (1) the philosophy of welfare work, Professor Henderson finding in an industrial

society like ours, with its unmistakable patriarchal heritage, a place for the voluntary activity on the part of employers for improving the condition of their workers over and above legal standards, until such time at least when the workers shall be prepared to enter into real "citizenship in industry" (to quote the author's title phrase); (2) a summary of the more recent examples of industrial betterment found in this country and abroad, with suggestions here and there for developing the physical, mental and moral efficiency of the worker in the aggregate, and a discussion of administrative machinery for carrying out these plans.

The examples of betterment cited cover a good deal of first-hand observation and show a familiarity with the recent movements for health and safety in the United States. On the other hand, there appears to be an under-estimation of the current tendency on the part of progressive business men to improve industrial relations in their establishments by placing emphasis on the development of the individual worker through scientific selection, adaptation and promotion and to reorganize and centralize activities contributing to this end into one bureau or department—ultimately a Bureau of Human Relations, it is to be hoped; vesting its administrative head with larger functions than Professor Henderson thinks possible for his Social Secretary to assume.

What one misses in the literature on Welfare is intensive evaluation of betterment systems in particular establishments, to see how they function in practice. Such an evaluation is not possible without a survey of all the various industrial relations existing between an employer and his employees. Particularly is there need of such surveys for establishing standards of good practice at a time when employers are vying with each other in copying measures designed to make for better human relationship in their respective establishments.

It is to be regretted that more literature of the authoritative kind, such as the present volume, is not available for the executive's desk, to fill the need, which Professor Henderson also recognizes, for getting socio-economic facts (meatily arranged, let it be said!) to employers of men. The author's suggestion for the training of betterment directors through the coöperation of schoolroom and plant is a good one, and should be utilized more widely by our institutions of higher learning.

An appended list of establishments in the United States, and certain countries of Europe, in which important welfare work is to

be found, together with those referred to in the body of the book, serves as a valuable guide to whomever desires to get into direct touch with the activities to be found in specific localities. A bibliography and table of contents further increase the usefulness of the volume as a reference work, although it is to be regretted that Price's recent valuable contribution on *The Factory* is not listed; neither do some of the newer related business books appear.

HENRY CLAYTON METCALF.

Tufts College.

NEW BOOKS

ADLER, F. *Marriage and divorce*. (New York: Appleton. 1915. Pp. 91. 75c.)

AERY, W. A. *Titustown: a community of negro homes*. (Hampton, Va.: Hampton Institute. 1915. Pp. 12.)

AGAR, F. A. *Church finance; a study of wrong methods and the remedy*. (New York: Missionary Education Movement of U. S. and Canada. 1915. Pp. 108. 50c.)

ANDREWS, B. R. *A survey of your household finances*. (New York: Teachers College, Columbia University. 1914. Pp. 16. 10c.)

BANNINGTON, B. G. *English public health administration*. London School of Economics. Studies in economics and political science, no. 46. (London: King. 1915. Pp. xiv, 338. 7s. 6d.)

Designed to be equally useful to students and to officials. According to the preface the volume treats the public health department as an administrative unit of English local government. There are chapters on Protection of the Food Supply and Public Health Finance.

BASHORE, H. B. *Overcrowding and defective housing in the rural districts*. (New York: Wiley. 1915. Pp. x, 92. \$1.)

A discursive presentation of the personal observations of a state health inspector in rural Pennsylvania. Covers land overcrowding, house overcrowding, defective building, and overcrowded and defective schools.

J. F.

BRAILSFORD, H. N. *The war of steel and gold. A study of the armed peace*. (New York: Macmillan. 1915. Pp. 340. 80c.)

BELL, W. M., editor. *Addresses at the world's social progress congress, San Francisco, April 1-11, 1915, under the auspices of the committee of one hundred*. (Dayton, O.: Otterbein Press. 1915. Pp. 400. \$1.25.)

BEMAN, L. T. *Selected articles on prohibition of the liquor traffic*. Debaters' handbook series. (White Plains, N. Y.: Wilson. 1915. Pp. 169. \$1.)

BLOOMFIELD, M., editor. *Readings in vocational guidance.* (Boston: Ginn. 1915. Pp. xii, 723. \$2.25.)

BOK, E. *Why I believe in poverty as the richest experience that can come to a boy.* (Boston: Houghton Mifflin. 1915. Pp. 16. 50c.)

BROWN, U. M. *A survey of housing conditions in Burlington, Vermont.* (Burlington, Vt.: Committee on Social Survey. 1915. Pp. 85.)

A compact, well-written study based upon six weeks of research in a Vermont city of 21,000 population. Covers 376 families in 209 houses in 3 districts of the city. Emphasizes questions of sanitation and maintenance of dwellings. J. F.

CARSON, W. E. *The marriage revolt; a study of marriage and divorce.* (New York: Hearst's International Library Co. 1915. Pp. xiv, 481. \$2.)

CHANCE, W. *Building by-laws in rural districts.* (London: King. 1914. Pp. vii, 63. 1s.)

A ten-page history and criticism of British rural building laws together with an annotated text of a "model code of by-laws suitable for rural districts drawn up by the Building By-Laws Reform Association and adopted by the British Constitution Association." The main aim of the "model code" is to exempt buildings "sufficiently isolated from others buildings" from the operation of existing and future building by-laws except those "dealing with drainage and sanitary conveniences." The passage of the "model code" would cheapen construction at the expense of light and ventilation. J. F.

COIT, S. *The soul of America. A constructive essay in the sociology of religion.* (New York: The Macmillan Company. 1914. Pp. x, 405. \$2.00.)

The distinguished leader of the London Ethical Culture Society, like many other thoughtful Americans, even those who have remained at home, seems troubled with doubts as to just what the soul of America is. Anyhow it needs development, and Dr. Coit offers a program to that end. He calls his book "a prospectus for the development of the Soul of America" and writes it "out of the belief that her moral potencies are at present running enormously to waste or lying idle, and are therefore practically as if they were in great part non-existent." But "the ultimate dynamic of all thorough reform in domestic life, in economics and politics, is to be found in the sense of the reality and urgency with which moral principles and social ideals are invested." The hope of America as a factor in the world's history will "henceforth depend" upon the recognition of herself as a spiritual organism which is to be unceasingly guarded against influences from within or without that might lower her standards. . . . and weaken or sidetrack the General Will of the nation. To this end, we must guard strictly against the corroding influences of immigration and the potentially disruptive influences of Roman Catholics, Marxian Socialists, and Some Others (title of chapter 5) and must conserve and concentrate our spiritual resources

into the great power of a self-conscious nationalistic social and ethical democracy.

Nothing, in Dr. Coit's opinion, is accomplished by an attempt at a premature cosmopolitanism. Nations are necessary interest-centers. He therefore proposes the formation of a church with national and ethical ideals, one that will give expression to a real social religion, through a national idealism, and a ritual that will at every turn emphasize loyalty to the nation's spiritual and social mission—whatever it may be—one that eschews the old notion that religion is an individualistic matter and that finds the service of God in the service of man. In short he would introduce into the church services "that sort of national idealism which during the last thirty years has increasingly entered into and emanated from the universities of America, so that all the world knows of the fact and talks of it." "This book itself is a cry to the churches to do what they might for America."

After all, however, the content of the book might well be regarded as an appeal to any nation to upbuild a social and democratic Christianity—minus the supernatural elements to which Dr. Coit objects. Part I deals with Religion and Nationality, part II with the Reinterpretation of Christianity in the Light of Science and American Idealism, part III with the thesis that Christianity should be expressed in scientific language and democratic symbol. The "American idealism" of part II we fear is Dr. Coit's own idealism; and we hear little of America in part III.

We may take this book, the reviewer believes, as a significant sign of the times. It reflects the same recognition of the need of organizing the ideals and the machinery of "the Great Society" that has been pointed out, with more clearness, by Graham Wallas in his book by that name. (See review in *AMERICAN ECONOMIC REVIEW*, vol. V, no. 2, June, 1915, p. 311.) Both books were written before the war, and we can join in the thought which must be in the mind of both writers that the need of spiritual organization is greater today than ever before.

A. B. WOLFE.

CRAIG, F. A. *A study of the housing and social conditions in selected districts of Philadelphia*. (Philadelphia: Henry Phipps Institute. 1915. Pp. 85.)

This is a painstaking bit of social investigation undertaken by specialists in pathology. The aim of the Institute was to gain "a clearer insight into those conditions influencing the course or causation of disease." A year and a half were spent in making the investigation; 1003 houses were examined with a population of 5812. Three races—Jews, Italians, and Negroes—and a fourth miscellaneous and scattered group of patients of the Institute are compared with reference to their living conditions. Eighty-six statistical tables and charts explain and illustrate the text. An important attempt is made to compare the housing conditions (structural) and the general standards of living.

J. F.

- DUNN, H. N. *Infamous juvenile law; crimes against children under the cloak of charity.* (Chicago: Harriet N. Dunn. 1915. Pp. 18.)
- EXNER, M. J. *Problems and principles of sex education; a study of 948 college men.* (New York: Association Press. 1915. Pp. 39. 10c.)
- FARRINGTON, F. *Community development; making the small town a better place to live in and a better place in which to do business.* (New York: Ronald Press. 1915. Pp. 257. \$1.50.)
- FRANKEL, L. K. *Standards in visiting nurse work.* (New York: L. K. Frankel, Metropolitan Life Ins. Co. 1915. Pp. 13.)
- HALL, E. R. *A report on housing conditions in the Oranges.* (Orange, N. J.: Civic Committee of the Woman's Club. Sept., 1915. Pp. 45.)
Covers several hundred families living in one and two-family houses and tenement houses of Orange, N. J. The housing conditions under which Italians, negroes, and several other races live are contrasted. Contains useful material concerning rentals. The presentation is less clear and systematic than that of the Burlington or Philadelphia reports noted in this list. J. F.
- JENNINGS, W. B. *The social teachings of Christ Jesus. A manual.* (New York: Revell. 1915. Pp. 111. 50c.)
- MABIE, E. C. *University debaters' annual.* (White Plains, N. Y.: Wilson. 1915. Pp. iv, 534. \$1.80.)
Consists of stenographic reports of the intercollegiate debates of a number of the leading colleges and universities in the academic year 1914-1915. Among the topics are minimum wage, government ownership of telephone and telegraph, socialistic control of the means of production and exchange, and single tax. A well-selected bibliography is presented for each of the topics. G. B. L. A.
- NEWMAN, B. J. *Housing of the city negro.* Paper no. 2 of the Whittier Centre. (Philadelphia: Whittier Centre. 1915. Pp. 8.)
A study of 1158 Philadelphia homes housing 4891 negroes. Deals primarily with house structure, sanitation, crowding and rentals.
- PARSONS, E. W. C. (John Main, pseud.) *Social freedom; a study of the conflicts between social classifications and personality.* (New York: Putnam. 1915. Pp. 106. \$1.)
- RITCHIE, F. H. *Community work of the Young Men's Christian Association.* (New York: Association Press. 1915. Pp. 96. 35c.)
- SLINGERLAND, W. H. *Child welfare work in Pennsylvania; a co-operative study of child-helping agencies and institutions.* (New York: Russell Sage Foundation. 1915. Pp. 352. \$2.)
- SMITH, E. J. *Maternity and child welfare. A plea for the little ones.* (London: King. 1915. 1s.)
- SPINGARN, A. B. *Laws relating to sex morality in New York City.*

Publications of the Bureau of Social Hygiene. (New York: Century Co. 1915. Pp. xiv, 139. 60c.)

TAYLOR, G. R. *Satellite cities. A study of industrial suburbs.* (New York: Appleton. 1915. Pp. xviii, 333. \$1.50.)
To be reviewed.

WALKER, R. E. *The problem of the southern cotton mill; an analysis of the sociological problem which the southern cotton mill and the operative present to this section of the country.* (Winston-Salem, N. C.: The Skyland Mag. 1915. Pp. 77. 50c.)

American foundations. (New York: Russell Sage Foundation. 1915.)
A selected bibliography having special reference to foundations for social welfare.

Constructive social measures. (New York: N. Y. Assoc. for Improving Condition of the Poor. 1915.)
A review of two years' work.

Fourth annual report of the Philadelphia Housing Commission. (Philadelphia: Housing Commission. 1914.)

Housing reform and community welfare. (Philadelphia: Commission on Social Service, Inter-Church Federation. 1915. Pp. 6.)

Prescribed reading and well-framed questions on the subject of housing prepared for the use of social study classes in churches, schools, clubs, etc.

One hundred views of service work and equipment operating through the divisions of the National Lamp Works of the General Electric Company, Nela Park, Cleveland, Ohio. (Cleveland: Corday & Gross Co. 1915. Pp. 90.)

The school and the immigrant. (New York: Board of Education, Division of Reference and Research. 1915. Pp. 96.)

Selected bibliography; women in industry. (New York: National Consumers' League. 1915. Pp. 4.)

The tenement house law and chapter XIXa of the Greater New York charter in relation to the Tenement House Department of the City of New York. (New York: Tenement House Dept. 1915. Pp. 89, lxi.)

Insurance and Pensions

Accident and Health Insurance. A Series of Lectures Delivered before the Insurance Institute of Hartford. Edited and compiled by H. P. DUNHAM and J. E. RHODES, 2ND. (Hartford: Conn.: The Insurance Institute of Hartford, Incorporated. 1915. Pp. 155.)

These thirteen lectures were delivered during the first half-year of 1915 before the Insurance Institute of Hartford. The collection

is one of a series of publications dealing with various branches of the insurance business. Previous volumes covered such topics as fire insurance, life insurance, and liability and compensation insurance, etc. The lecturers are, as a rule, practical insurance men connected in various capacities with the insurance companies. The aim of the courses is to train the young insurance men in the local companies, to help them to a broader view of their business, and to give them an insight into the logical relations of its various parts.

The volume under review touches upon the important phases of the accident and sickness insurance business. There are chapters on the history and scope of sickness and accident insurance; there is an interesting account of the rise of this business in England and of its introduction into the United States; there are lectures on the characteristics of the policy contracts; the relation of the medical examiner and the selling agent to the business; the adjustment of claims; the value of advertising; and the statistics of sickness and accidents. It is to the credit of the contributors to this volume as well as of the managers of the Insurance Institute that they have done so well in the presentation and arrangement of these lectures.

The point of view is wholly that of the "insider" to the "insider," and the lectures sound like family counsel. They treat of the routine problems arising in the handling of the business both in the home office and in the agency field, presenting a good picture of the everyday workings within an accident and health insurance company. The reader can at once see what these insurance men are thinking about and what problems they regard as most important in their own field.

Particular mention may be made of two lectures. That on The Accident Policy is especially instructive. It analyzes the various clauses commonly met with in an accident policy, and indicates the limits of liability assumed by the companies under their contracts. Advertising as a Factor in the Selling of Accident Insurance will be considered by many readers the most suggestive lecture of the series. It is a very clear statement of the psychology of advertising and is as applicable to one line of business as to another.

It is to be regretted that this interesting volume does not contain a lecture on the social bearings of health and accident insurance. The point of view, as has been said, is entirely that of the private company dealing with individuals and not with groups of workers. There is nothing so important today in the insurance field as the

problems which center around the term "social insurance." Yet the attitude of the insurance companies toward the movement for extending sickness and accident insurance to the working population is not considered. Such matters vitally affect the future of the accident and health insurance companies in America and should be considered side by side with the technical details, in order to give the insurance employee an insight into the wider field which his business serves. It is to the companies whose employees are most intimately connected with the Insurance Institute of Hartford that the country will of necessity turn to help solve some of the perplexing questions which will develop with the extension of sickness and accident insurance to the masses in this country.

LOUIS I. DUBLIN.

Life Insurance. A Textbook. By SOLOMON S. HUEBNER. (New York: D. Appleton and Company. 1915. Pp. xvii, 482. \$2.00.)

The Education and Conservation Bureau of the National Association of Life Underwriters suggested the preparation of this book to supply "a comprehensive text-book adapted to the needs of class-room instruction in colleges and high schools," and also "as a clear and simple exposition for laymen and life insurance solicitors." Professor Huebner is one of the pioneers in insurance education in this country and, considering the various classes for whom the book was prepared and the extensive number of subjects treated, his task has been well done.

Part I is devoted to a discussion of the nature and uses of life insurance; part II discusses the science of life insurance; part III treats of the special forms of life insurance; part IV describes the organization, management and supervision of legal reserve companies; and part V discusses the important legal phases of life insurance. The appendix includes reprints of specimen policies and of an address by Professor Huebner on "Life insurance salesmanship."

Part II was written by Bruce D. Mudgett, instructor in insurance at the Wharton School, and is a very good brief discussion of rates, the reserve, surrender values, and surplus. Few insurance solicitors, probably, will have the patience, interest, or ability to read and understand it. Dr. Mudgett also contributes a chapter on Disability Insurance, which is a condensation of his excellent monograph on *Total Disability Provisions in American Life Insurance Contracts*. While insurance is chiefly a subject for state

regulation, there have been a number of important decisions by the Supreme Court of the United States on the fundamental character of the business. It would seem, therefore, that discussion of these subjects, such as the power of the state to determine rates, as passed upon in the recent Kansas case, the Deer Lodge case, and others, would have made part V more complete.

Although the book can not be considered "a comprehensive text," nevertheless, its brevity, when considering its range of subjects and some of the classes for whom it was written, may be a merit. In the opinion of the reviewer it might have been made more brief without any loss in usefulness by omitting the thirty pages of sample policy forms. This material can be secured in abundance from insurance companies.

W. F. GEPHART.

Washington University.

Old Age Pensions: Their Actual Working and Ascertained Results in the United Kingdom. By H. J. HOARE. (London: P. S. King & Son. 1915. Pp. xi, 196. 3s. 6d.)

Mr. Hoare, who was a clerk of the Local Pension Sub-Committee for Camberwell and Lewisham,¹ wrote this book before the outbreak of the war "for the social student and investigator, for the ordinary citizen . . . and for persons engaged in actual administration." He calls it "a practical and human account of the actual working and ascertained results of the Acts." The acts are, of course, those of 1908 and 1911.

The volume chiefly tries to show how the various problems arising under the terms of the act have been worked out. Pensions are payable at the age of 70, but civil registration of birth became compulsory in England only in 1875. The regulations of 1911 sanctioned such other evidences of age as certificates of baptism, of marriage, of service in the Crown forces, and of membership in friendly or provident societies, or trade unions. Although in some cases "appearance and bearing" have been accepted as evidence of age, yet many persons are denied a pension because unable to prove their age. In fact 13 per cent of all claims are disallowed on age grounds. This chapter on age throws light on many peculiar difficulties and emphasizes the primary need for a complete civil registration of births.

The prescriptions of the law of 1908 regarding nationality and

¹ Mr. Hoare died at the Dardanelles in August, 1915.

residence created many hardships turning on such problems as sojourn outside of England and marriage to a foreign man followed by widowhood. The law of 1911 by prescribing that at least 12 years out of the previous 20 should have been spent in England, and by other provisions, seems "to have removed practically all the cases of hardship and to have combined the equitable treatment of the deserving poor with the protection of the tax-payer."

The English law denies pensions, or grades their amount, according to the income of the applicant. The latter is anxious to have sanctioned as many deductions as possible from his actual income in order to qualify for a pension or a higher pension. The committees deduct from income traveling expenses when necessarily incurred in the course of employment and payments to friendly societies when these are exceeded by sums received from the societies, but taxes may not be deducted from income, nor may voluntary allowances from children be deducted. This last provision Mr. Hoare agrees "must diminish the willingness of children to contribute to the support of aged parents of the old age pension class." A problem is created when people "have considerable means invested at as low as 1, 2 or 3 per cent." The machinery of the acts has not run wholly smoothly in its concern with the means of people.

A relaxation of the poor relief qualification in 1911 admitted over 160,000 pensioners to the roll. The authorities have not allowed a repayment of poor relief to remove the disqualification which receipt of poor relief entails. Habitual failure to work according to ability, opportunity, and need also disqualifies, but we are told that in practically every case an applicant disqualified on this ground appeals.

One of the most interesting results of the English experience with old-age pensions is the discovery of the frequent absence of cleanliness on the part of the pensioners. "Of 151 men and women pensioners admitted to a London infirmary between May, 1909 and December, 1910, only 1 man out of 63, and 6 women out of 88, could be described as entirely clean, while 6 men and 33 women were in a deplorable condition, and of 1 woman it was stated that 10 baths were required to cleanse her properly." Mr. Hoare is with those who consider that it is contrary to public policy that persons receiving state aid should live below a reasonable standard of domestic and bodily cleanliness. The London Local Pension Committee discussed this unforeseen problem but held the obstacles

to its solution to be insuperable. A greater inspection staff would be necessary, a standard of cleanliness would be difficult to devise, and pensioners are often not responsible for domestic cleanliness at any rate.

Claims for pensions must be made four months before the pension can be given. Although false statements in connection with claims are punishable, there have apparently been few prosecutions. On the other hand, few really unnecessary appeals from decisions are made.

A chapter on the statistics of working shows that in the first six months under the act over 800,000 claims were received, but that the annual rate since has been about 175,000 except in 1911 when, because of the relaxation of the poor law provisions, 385,000 claims were received. In 1912-1913, a fairly typical year, 20,500 claims were rejected on grounds of age, 8,700 on grounds of receipt of poor relief, 12,000 on grounds of income, and 2,100 on other grounds. During the year 65,000 pensioners died.

Out of 968,000 pensions payable on the last Friday in the year, 915,700 were payable at the full rate of five shillings, and only 4,500 at one shilling. The possibility under the English act that men who in the years before receiving a pension gradually spend their savings so as to qualify for a larger pension, which would give them the same total income as if they had not spent their savings, is not discussed by the author. Certainly, however, the figures just presented indicate an extraordinary proportion of persons receiving the highest pension.

The burden of the pensions in 1912-1913 was £12,315,000 compared with £8,776,000 in the 12 months of 1909-1910. In the United Kingdom 63.7 per cent of the population over 70 years of age were in receipt of pensions. The proportion is higher than for England alone because 68.8 per cent of the same population group in Ireland receive a pension. Women pensioners are 62.5 per cent of all, but in Ireland they are 57.7 per cent, and in London 69.3 per cent. Just what these considerable variations signify is not yet clear. Between 1906 and 1913 the number of indoor paupers over 70 decreased nearly 20 per cent, the number of outdoor paupers 95 per cent, but for London at least the reduction of poor relief cost is greatly less than the pension cost.

Mr. Hoare makes a few suggestions for improvement, such as the introduction of a dirt disqualification and the discontinuance of a pension when the pensioner enters a poor law institution for medi-

cal or surgical aid. At various points it is clear that he regards the machinery of the acts as cumbrous and he specifically charges that there are too many authorities for efficiency. On the other hand, he holds that the acts have, on the whole, worked exceedingly well and smoothly and have been a blessing to a very large section of aged and deserving poor.

It is a compact and clear picture which Mr. Hoare presents. He has raised no large questions of principle; he has made no comparisons with the institutions of other countries. We have had other accounts of the English act much more pessimistic than Mr. Hoare's, but I am not sure that they have been better grounded than his. It is not to belittle his contribution to say that profounder studies are desirable before we confidently assess the merit and rank of the English legislation.

ROBERT F. FOERSTER.

Harvard University.

NEW BOOKS

DAWSON, M. M. *Comparative reserve tables*. Third edition, revised and enlarged. (New York: Chronicle Co. 1915. Pp. xxviii, 383. \$25.)

ZAHN, F. *Wirkung der deutschen Sozialversicherung, mit Nachtrag: Die Sozialversicherung und der jetzige Krieg*. (Munich: J. Sweitzer. 1915. Pp. 116.)

Fire insurance laws, taxes and fees. Revised to August 1, 1915. (Chicago: Spectator Co. 1915. Pp. 515. \$5.)

Fire insurance in New England for ten years, December 31, 1905-December 31, 1914, inclusive. (Boston: Standard Pub. Co. 1915. Pp. 234. \$5.)

Lectures delivered to the associate members of the Fire Underwriters' Association of the Pacific, 1914-1915. (San Francisco: Fire Underwriters' Association of the Pacific. 1915. Pp. 204. \$1.)

Workmen's compensation law of the state of California; revised with amendments, August, 1915. Connecticut, July, 1915. Michigan, August, 1915. (New York: Roy Press. 1915. Pp. 52; 28; 31. 25c. each.)

Workmen's compensation law of the state of New Hampshire, August, 1915. New Jersey; revised with supplementary acts of 1915, August, 1915. (New York: Peck and Durham. 1915. Pp. 12; 24. 25c. each.)

Workmen's compensation law of the state of Illinois; revised with amendments, August, 1915. Massachusetts, July, 1915. Nevada, August, 1915. Alaska, August, 1915. Hawaii, August, 1915.

(New York: G. I. Wilson & Sons. 1915. Pp. 32; 36; 31; 30; 31. 25c. each.)

Pauperism and Charities

NEW BOOKS

BREITHAUPT, G. W. *Oeffentliches Armenrecht und persönliche Freiheit.* (Tübingen: H. Lauppsche Buchhandlung. 1915. Pp. 150. 4.60 M.)

VAN WYCK, K. L. *Organized poor relief in Wisconsin.* (Madison: University of Wisconsin, Extension Division. 1915. Pp. 11. 5c.)

WARD, H. F. *Poverty and wealth; from the viewpoint of the Kingdom of God.* (New York: Methodist Book Concern. 1915. 50c.)

Paupers in almshouses, 1910. (Washington: Bureau of the Census. 1915. Pp. 141.)

Socialism and Coöperative Enterprises

NEW BOOKS

BARNETT. *Practicable socialism. Papers by the late Canon and Mrs. S. A. Barnett.* New series. (New York: Longmans. 1915. Pp. xiv, 338. \$1.75.)

BATDORF, J. W. *Anti-socialism. A plea to patriotism. The federal Constitution.* (New York: Anti-Socialist Press. 1915. Pp. 32. 5c.)

BEER, M. H. *History of English socialism.* Two volumes. (New York: Macmillan.)

DESTREE, J. *Les socialistes et la guerre européenne.* (Paris: Van Oest & Cie. 1915. Pp. 128. 1.50 fr.)

ELDER, B. *A study of socialism.* (St. Louis: Herder. 1915. Pp. 354. \$1.)

MORRIS, W. *The pilgrims of hope; and chants for socialists.* (New York: Longmans. 1915. Pp. 81. \$1.)

OPPENHEIMER, F. *Eine Revision des sozialdemokratischen Programs.* (Berlin: Heymann. 1915. Pp. 11.)

RUCZKA, G. *Die französischen Sozialisten und der Krieg. Partei der ukrainischen Sozialrevolutionäre.* (Vienna: Julius Feith. 1915. Pp. 16.)

SOTHERAN, C. *Horace Greeley and other pioneers of American socialism.* (New York: Kennerley. 1915. Pp. 400. \$1.)

The first issue was published twenty-five years ago.

VILAS, M. S. *Municipal railway of San Francisco.* (Burlington, Vt.: Free Press Assoc. 1915. Pp. 31. 25c.)

Statistics and Its Methods

Graphic Methods for Presenting Facts. By WILLARD C. BRINTON. (New York: The Engineering Magazine Company. 1914. Pp. xii, 371. \$4.00.)

As used in statistics the "graphic method" may mean either a method of analysis or an expository device. Mr. Brinton's book is more largely concerned with the second aspect of the method. It is a fresh and elaborate treatment of matters regarding which most teachers of statistics have had to be content to refer their students to Levasseur's paper of 1885 and to Gabaglio's *Teoria Generale*. Painstakingly done, and illustrated with over 250 well-chosen figures, the book will probably be of much service to the persons for whom it is primarily intended, namely, those who have to prepare graphic exhibits of facts bearing upon the problems of particular business undertakings. The student of economic or social statistics will get some help from it, but largely upon such purely technical matters as the proper preparation of charts and maps for the photo-engraver. Mr. Brinton's fundamental criterion of good graphic work is, properly enough, that it should convey its meaning to an uninstructed or even (it would seem) unintelligent observer, with the maximum accuracy possible under the conditions and with the minimum demand upon the attention of the observer. This is undoubtedly a good first principle of procedure, even for work addressed to an audience of practiced statisticians, so that here also the student will find that Mr. Brinton has many useful hints. But the book is altogether too large. The text is prolix, full of repetitions, and contains little of value that is not also given in the form of explanatory notes attached to the various charts. Most users of the book will find reference to these charts and explanatory notes ample for their purposes. The book would have been better if it had appeared in the form of a thin album of graphic statistics, with the text omitted.

Despite the care and general good sense shown in Mr. Brinton's work there are not a few points at which he slips. His criticism of certain charts (Figs. 114, 117, 118) intended to show the correlation of such things as rainfall and corn yield is unsound. There is no particular virtue in the use of a common zero line (for arithmetic scales) when units so dissimilar are being measured. He claims too much for the logarithmic vertical scale (pp. 132-137). The logarithmic scale is just as ill-adapted to showing absolute change as the arithmetic scale is to showing relative change. He

argues (pp. 254-256) for the superiority of connected points ("peak-top curves") over successive rectangles ("flat-top curves"). But the use of successive rectangles is the only really accurate method. It indicates the limitations of the statistics and avoids arbitrary interpolation. Mr. Brinton gives an interesting account of the construction of pin maps, but his general discussion of map making would have been improved if he had taken account of Professor Ripley's instructive paper on that subject. He departs from his theme to discuss "methods of collecting and tabulating data," but merely gives an account of the Hollerith machines. A description of simple time-saving methods in the use of cards and tally-sheets, together with some consideration of the proper planning of tables would have been more useful to the majority of his readers.

ALLYN A. YOUNG.

Cornell University.

Income. An Examination of the Returns for Services Rendered and from Property Owned in the United States. By SCOTT NEARING. (New York: The Macmillan Company. 1915. Pp. xxvii, 238. \$1.25.)

The scope of Professor Nearing's book is accurately described in the subtitle. It is an attempt to substitute for the old categories of rent, wages, interest, and profits a new distinction between income from service and income to property; to measure for the United States, so far as the statistical data permit, the return to effort as contrasted with the return to property; to prove that service is underpaid and property ownership disproportionately rewarded; and to sound a warning that present methods of distribution must be changed, or!

The book is about evenly divided between the presentation of statistical data and an analysis of their significance. The wages data, taken largely from Professor Nearing's earlier work, *Wages in the United States*, are supplemented by census and other statistics showing the relative importance or unimportance of salaries as contrasted with wages. The wages data are comprehensive and sufficiently accurate for the purpose in hand. The measurements of the amount of property and the return thereto are, of necessity, rather loose estimates based upon census statistics of wealth and the corporation aggregates derived from income tax returns. Mr. Nearing finally decides that the total property in-

come in the United States is now well above the six-billion-dollar mark.

There are probably ten million families in the United States which spend less than \$500 a year; there are probably twelve million families in the United States, which, together, would have an annual expenditure averaging \$500. The six billions of property income would pay all of the expenses of these twelve million families, or, added to their incomes, would raise them to a level of income respectability.

It is not altogether easy to reconcile this conclusion with previous statistics furnished by the author which suggest that of the adult male wage-earners in industry, taking no account of unemployment, a third earn less than \$500 a year. No adequate discussion of family income is offered, and if there are twelve million families spending less than \$500 a year on the average, they must be made up largely of farmers and agricultural laborers with respect to whom mere money is of doubtful significance. And the professional economist will be inclined perhaps to charge the author with an uncritical use of doubtful statistical material—although he will probably use Mr. Nearing's twenty-four statistical appendices in his classes and secretly admire the Mulhallian ingenuity with which he has manipulated the available statistics to concoct the aggregates which his analysis demands. After all, however, the chief interest of the book is not statistical, and the treatment does not require great quantitative accuracy. And the statistical estimates are fairly made. If there are not twelve million families whose annual incomes are insufficient to procure them the decencies and necessities of life, there are still millions enough to make every thoughtful person, conservative or radical, pause and consider.

The analytical or doctrinal sections of the book will arouse much interest. Professor Nearing not only maintains that the old categories of rent, interest, wages and profit are "indefensible" and "outworn" (although he makes constant and important use of three of them), but goes to the length of asserting that:

The division of total income into service income and property income meets every demand of both theory and practice. Theoretically, there is a clearly marked line of distinction between that income which is derived from the rendering of services and that which is derived from the ownership of property. Service denotes the expenditure of energy. Property ownership bespeaks a legally established right. Service and ownership are two essentially different concepts. Furthermore, an examination of the various forms of income (using that term to mean a flow of purchasing power) fails to show any share of the income fund which does not fall within this classification. Modern accounts

are so kept that the sum paid for services (compensation) is readily distinguishable from the sums paid to the owners of property (interest and dividends). The substitution of the corporate form of business organization for the one-man business and the partnership has resulted in the virtual elimination of every form of income save these two.

These claims are rather sweeping. There is, of course, a real distinction between service and ownership. There are those who serve but have no property to speak of; while there are those who own and yet render no service which one can discover. But the proposed classification seems to be incomplete. Mr Nearing says almost nothing about "gains and profits" and his silence on the point is significant. They find no natural place in his classification, they issue partly from personal exertion and partly from the ownership of property, and they represent in part one of the most dubious categories of present-day income. Many "swollen fortunes" have been built up not from "property income" but by trafficking in capital values. They have resulted from the purchase, manipulation and subsequent sale of stocks and bonds. This is not return *to* property. It is rather gain or profit from the manipulation and sale of property. It results from personal exertion, sometimes a very demoralizing kind of personal exertion.

In the second place an important part of the "labor, toil and sacrifice" which make up the "exertion" of the common people is expended for the purpose of accumulating property. The wage earner who toils and skimps to buy a home "earns" the subsequent rental therefrom as truly as he earns the wages which he received. Work and saving for this purpose are of enormous importance particularly among farmers, agricultural laborers, and immigrants. Mr. Nearing of course does not deny all this. On the contrary he explicitly calls attention to it. But apparently he forgets it, inasmuch as implication is heaped on implication and suggestion upon suggestion, all to the general effect that there is a peculiar legitimacy in service income and a peculiar illegitimacy in property income. Stripped of irrelevant matter it is difficult to see in the newly formulated problem which Mr. Nearing presents, anything essentially different from the old problem of inheritance. If men do every day and in large numbers toil and moil to accumulate property, they "earn" the usufruct thereof during their lives just as much—and just as little—as they "earn" the wages which they receive. Whether their heirs or assigns earn the income is another and a very old story.

In his statistical discussions Mr. Nearing constantly assumes

that dividends and interest fairly measure the "return to property." There would seem to be an error here, possibly an important error. In the great majority of small corporations today the investor who simply buys stock and sleeps on it, awakens finally to nothing but disappointment. The men who invest successfully in small corporations find it necessary to take an active interest in the conduct and affairs of those corporations. In thousands of corporations dividends and salaries are practically interchangeable. The principal officers own practically all of the stock and take their return in dividends rather than in salaries merely to make a good showing at the banks. Shareholders "earn" their dividends to an appreciable degree. Similarly, agricultural landlords earn a part of the rents which they receive. The retired farmer who does not supervise his tenant is apt to get in the end little net rent. So far as bonds are concerned there are enormous losses which must be taken into account.

There is probably a pure return for the use of property, at least as a theoretical ultimate. But when we strip dividends and interest of the return for personal exertion and compensation for risk, the residue is largely our old friend "pure interest" whose legitimacy has been industriously questioned since the time of Karl Marx at least. Indeed it seems to the reviewer that Mr. Nearing's principal problem could have been investigated more easily without the statistical apparatus which he erects. Modern capitalism Mr. Nearing calls "economic parasitism." The real object of his book seems to be an attempt to prove that the four or five per cent which an investor may safely charge for the mere use of capital is an inequitable and disproportionate charge compared with the \$500 a year which the average wage-earner is able to obtain for his personal participation in modern industry. This is a grave question, but it is not to be answered by showing that one half of the net income of the average corporation is paid out in dividends, or that in the furniture industry wages constitute thirty-one per cent of the value of the product, whereas in the meat-packing industry wages constitute only three per cent of the value of the product.

It is an old and impudent trick on the part of reviewers to censure authors for not answering questions which the reviewers want answered. But Mr. Nearing raises grave issues and reaches vital conclusions by statistical arguments which impress one as in large part irrelevant. It seems a pity that more thorough con-

sideration could not be given to the charges of exploitation and parasitism. For instance, the author insists that "property income enjoys priority in its claims upon the proceeds of industry," that "the vicissitudes of industry affect property income less sharply than they affect service income," and that "income-yielding property is relatively permanent." These assertions may be true. But they cannot be substantiated by a discussion so brief that no account is taken of mechanics' liens and wage-priority laws; of the precarious irregularity of dividends in the case of many, perhaps a majority, of present-day corporations; of the enormous losses sustained by those who put their trust in stocks and bonds. Is it true as a matter of fact that dividends are more regularly paid than wages? How much time and space should a scientific author give to the substantiation of such a statement as the following:

At present, labor shoulders the give and take of prosperous and adverse years. When times are bad, men are laid off. Orders decrease, and part-time work automatically ensues. Meanwhile the snipping of coupons sounds at regular, unvaried intervals, and the book in which dividend checks are drawn is busy four times each year.

Furthermore, if property has established a prior claim, we must face the possibility that, after all, in modern industry, credit may be more indispensable than labor. It is a revolting possibility, but still a possibility which the scientific inquirer must face without becoming excited. And if we credit this priority to exploitation and parasitism, what deduction should be drawn concerning the intelligence of the electorate which permits itself to be exploited? Among the whites, we have had universal male suffrage in this country for nearly a century. If a free people in that time can not rid itself of parasitism is there much hope for such a people? Or after all is the trouble something deeper than "industrial parasitism"?

Mr. Nearing is, however, on solid ground when he points out the insufficiency of wages, calls attention to the extreme concentration of wealth and directs our attention to the incompatibility of democracy and the existing distribution of wealth. The facts here are not, we believe, in dispute; and the author is probably right in insisting that conditions can not continue as they are, that they spell social revolution. It makes no difference who is to "blame" or what is "responsible." The existing distribution of wealth can not be reconciled with democratic institutions, and before long one or the other must be seriously modified. Mr. Nearing

renders invaluable service in again arousing us to this great truth in pointed, biting sentences that seize the attention. His style is homely and stirring. He wastes few words. Pedantry is absent. Both author and book are frank and courageous. If they seem to be radical, it is because here the facts are radical.

T. S. ADAMS.

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Mortality Laws and Statistics. By ROBERT HENDERSON. (New York: John Wiley & Sons, Inc. 1915. Pp. v, 111. \$1.25.)

The purpose of this monograph "to set forth in concise form the essential facts and theoretical relations with reference to the duration of human life" is especially well carried out when we consider the small amount of space taken by the author to accomplish such a purpose. The work is concerned with life contingencies, excluding monetary applications.

The book begins with brief descriptions of the preparation and use of the mortality tables that have been of greatest importance in the development of life insurance in England and the United States. The mortality tables thus described are: The Breslau Table, The English Life Tables, The Northampton Table, The Carlisle Table, The Actuaries' or Combined Experience Table, the Healthy Male (H^m) Table, The British Offices' Life Tables, The American Experience Table, The National Fraternal Congress Table, The M. A. Table of the Medico-Actuarial Mortality Investigation, McClintock's Annuitants' Mortality Tables, and The British Offices' Life Annuity Tables.

The work next deals with formulas for the probabilities of life and death and with the mathematical relations between various functions connected with human mortality. The chapter on Formulas for the Law of Mortality treats the formulas of Gompertz, Makeham, Wittstein, and Pearson as means of expressing facts of mortality by frequency functions.

Statistical applications are then taken up to obtain formulas for the rate of mortality for a stationary population and to indicate how to make corrections to meet the actual conditions of a population.

The second half of the work is devoted to the construction and graduation of mortality tables from the mortality statistics of general populations and from the mortality experience of life insurance companies. In the development of the necessary formulas

the author has kept very close to the applications—a plan which makes this work both readable and very useful. Much is done to render the work concrete by constructing from given census data a Northeastern States Mortality Table, and by showing the various steps involved in the construction of the final table.

There are given in the appendix to the work ten useful mortality tables.

It seems desirable to criticise the use of two mathematical expressions. On page 20, lines four and five, the expression "algebraic function" does not appear to be used in its conventional and well authorized sense; for, a function need not be an algebraic function in the ordinary sense to have a determinate derivative. On page 30, last line, we read that "any mathematical law, however, gives a smooth series which enables formulas of approximate summation or integration to be used" It is not absolutely clear what the author here means by the expression "smooth series." However, I take the statement quoted above to mean that a mathematical law or function gives a continuous curve. If I am correct in this inference, the statement is too general. Mathematical functions are well known which do not give continuous curves. The author's statement holds if the law is given by a continuous function.

H. L. RIETZ.

University of Illinois.

Les Bases Théoriques de la Statistique Agricole Internationale.

By UMBERTO RICCI. (Rome: Imprimerie de l'Institut International d'Agriculture. 1914. Pp. xii, 314. 5 fr.)

This volume by the chief of the General Statistical Office of Italy is a revised and enlarged edition of two papers prepared by him at the request of the permanent committee of the International Institute of Agriculture and read at the meetings of the International Statistical Institute at the Hague in 1911 and in Vienna in 1913 respectively. The original papers were published in the bulletins of the International Statistical Institute.

The first part deals with statistics of acreage and production and the second part with statistics of condition of crops. The treatise takes up in detail the objects and the technical difficulties of agricultural statistics. The author deals entirely with methods and principles and expressly omits all discussion of accuracy of data, selection of field agents, etc., nor does he deal with statistics of live-stock. By thus limiting his field M. Ricci is enabled to de-

vote much space to the clarification of many debated and unsettled problems of statistical method.

M. Ricci's work is a contribution of immense value not only to those interested in international statistics of agriculture but also to those who are concerned with agriculture in any country, for in discussing questions of uniformity the author incidentally hacks through many a Gordian knot that has puzzled agricultural statisticians for years. Such problems as the proper distinction between productive and unproductive land or the proper handling of an area yielding more than one kind of crop during a year, simultaneously or consecutively, are discussed in a thorough and illuminating manner. The actual practice of the principal countries is described and suggestions as to desirable modifications are numerous and valuable. A complete and logical classification of crops is worked out in detail. A program for adoption by the different countries in regard to statistics of acreage and production is presented in chapter 14.

Chapters 15 to 27 discuss statistics of crop condition, chapter 27 presenting a program of action. The author prefers the method of actual estimates, expressed in percentages of a decennial average, to a method of classification of conditions as good, medium, and bad. He suggests that such estimates be collected on the first of each month of the growing season in order that the International Institute be enabled to publish them by the middle of each month.

E. A. GOLDENWEISER.

Washington, D. C.

NEW BOOKS

CULLIMORE, A. R. *The use of the slide rule.* (New York: Keuffel & Esser Co. 1915. 50c.)

DIENER, R. *Das Problem der Arbeitspreisstatistik und seine Lösung mit Hilfe von Berufsterblichkeits- und Lohnstatistik.* (Munich: Duncker & Humblot. 1915. Pp. 184. 2.50 M.)

KEYNES, J. M. *Principles of probability.* (New York: Macmillan. 1915.)

MACNUTT, J. S. *A manual for health officers.* (New York: Wiley. 1915. \$3.)

Contains a chapter on vital statistics.

STAMP, J. C. *British incomes and property. The application of official statistics to economic problems.* (London: King. 1915.)

The Canada year book, 1914. (Ottawa: Minister of Trade. 1915. Pp. 698.)

DOCUMENTS, REPORTS, AND LEGISLATION

Industries and Commerce

THE THIRD NATIONAL CONFERENCE ON MARKETING AND FARM CREDITS, held in Chicago, November 29—December 2, brought together the greatest group of experts on these problems that our country has ever seen. There were present 432 delegates from 40 different states, 3 Canadian provinces, and one foreign country. The delegates were farmers, bankers, professors, editors of farm papers, managers of coöperative enterprises, railway traffic men, officials from grain exchanges, officers of the Equity Society and other farmer unions, representatives of the state departments of agriculture, state marketing bureaus, and the Department of Agriculture at Washington.

The program was a joint program with the National Council of Farmers' Coöperative Associations and the National Association of Marketing Officials. The conference limited its attention strictly to the two problems—marketing and farm credits; and was a clearing house of ideas and practices. The 58 speakers are all specialists in the matters which they discussed, some being men of international reputation.

Myron T. Herrick, former ambassador to France, author of our leading work on rural credit, delivered an important address on "A plan for financing farm business." Mr. Herrick is satisfied on two points: that coöperative credit must come through self-help, not government subsidy, and that the money market will absorb all the standard long-time paper in the form of debentures, land association bonds, or other standardized forms of land credit which will be issued. This paper should run for a long period, at a low rate of interest, principal and interest payable on the amortization plan. Mr. Herrick sounded a note of warning against unsound credit schemes proposed by politicians or vote-getters, or by local promoters who see a chance to exploit a popular movement.

Continuing the discussion on rural credits as related to land purchase, Mr. Charles W. Holman, secretary of the conference and special investigator of Irish conditions, spoke on the "Irish land purchase system and its application to America." Mr. Harris Weinstock, of San Francisco, discussed the same topic, both speakers dwelling on the agrarian revolution and the social revolution which have been taking place in Ireland during the last 30 years. Like David Lubin, these speakers stressed the dangers confronting us of an increase in absentee landlordism. Indeed, the conviction was conveyed by many speakers that we are

already cursed with absentee landlordism and are approaching the low estate of Ireland 30 years ago. In many states over half the farmers are renters; and with farm lands soaring in value the condition of the renter must become hopeless unless some remedy is devised. David Lubin urged a national council of agriculture.

John Lee Coulter spoke of the 21/3 million "landless men of America" who are farmers. By an ingenious calculation he showed how many of these will inherit land from their parents, how many desire to remain renters, how many do not need credit, and how many are unfit to have credit. He favors more state oversight of land merchandizing and less of the speculative free trade in land. "What the national and state banks are now doing in rural credits" was discussed by B. F. Harris, chairman of the agricultural committee of the American Bankers' Association. "What the farm mortgage bankers offer" was discussed by F. W. Thompson, president of the Farm Mortgage Bankers' Association, and manager of the credit department of the Merchants' Loan and Trust Company, Chicago. Elwood Mead and others outlined the rural credit system needed in developing western lands, especially irrigation projects.

Charles J. Brand, chief of the Bureau of Markets, United States Department of Agriculture, outlined the problem of market grades and standards for farm products. The weakest side of farm marketing occurs here, but Mr. Brand hopes to see in the distant future a working scheme of standardization of all farm products together with standardized containers and guaranteed quality. W. G. Scholtz, director of markets of the state of Idaho, spoke of the work being done by his bureau and by the twelve similar bureaus in other states. Charles McCarthy, of the Wisconsin Legislative Reference Library, pointed out legislation needed for standardization. The success and the failure of coöperative societies in marketing were described by men with first-hand experience. Charles A. Lyman, chairman of the legislative committee of the Wisconsin Society of Equity, gave the story of the failure of the Equity Packing House at La Crosse. In this venture, the promoters in some cases charged 34 per cent commissions on sales of the shares of stock to farmers. E. M. Tousley, for the past ten years head of the fight made by the Right Relationship League of Minneapolis for coöperative stores on the Rochdale plan, gave a "sermon" out of his own experience, showing the capitalistic drift and consequent wreck of many coöperative schemes. R. W. Hockaday, general industrial and agricultural agent of the M. K. and T. Railway Company, St. Louis, showed how the peach-growers of the South, unorganized and competing, in one

day consigned over his road 75 cars of peaches to St. Louis when the St. Louis market could take care of only 12 cars. This anarchy in marketing could be changed by organizing the producers and by working through an agent at the chief central markets, as is done by the orange-growers of California through the California Fruit Growers' Exchange. Such organization would lead to standardization of product, savings in marketing, an increase in consequence in the profits to the producer, and at the same time in cheapening the price and improving the quality to the consumer. This central idea of marketing reform was discussed by many practical speakers.

Special features of the marketing problem likewise received adequate attention. Clarence Ousley, of Texas, spoke on "State warehousing and the cotton bale in the South." J. W. T. Duval, chief of grain standardization, United States Department of Agriculture, discussed "What would be acceptable standards in grain." "Our terminal elevator system" was discussed by the four following speakers: George F. Chapman, editor of *Grain Growers' Guide*, of Winnipeg; James E. Boyle, professor of economics at the University of North Dakota; J. C. F. Merrill, secretary of the Chicago Board of Trade; J. M. Anderson, president of the Equity Cöoperative Exchange, St. Paul. "The relation of cöoperation to conservation" was discussed by Gifford Pinchot.

That the efforts of the conference might lead to action, provision was made for the appointment of a committee of ten to bring about the creation of the American Agricultural Organization Society. Sir Horace Plunkett is to help in this work, giving this country the benefit of his experience with the similar Irish society. The objects of the American society are as follows:

1. To examine into the methods of production and distribution of farm products with a view to evolving a system of greater economy and efficiency in handling and marketing the same.
2. To encourage and promote the cöoperative organization of farmers and of those engaged in allied industries for mutual help in the distribution, storing, and marketing of produce; for the economical transfer of agricultural produce from the producer to consumer for, in short, the efficient organization of the business of agriculture.
3. To supply instructors and lecturers upon the subject of cöoperation among farmers, auditing and accounting experts, and legal advice in matters relating to organization.
4. To issue reports, pamphlets, and instructions which will help in spreading knowledge of the best means of rural betterment and organization.
5. To organize and cöoperate with central bodies and local branches of societies of other associations, for the promotion of "better farming, better business, and better living."

6. To encourage and coöperate with educational institutions, departments, societies, educational centers, etc., in all efforts to solve the questions of rural life, rural betterment and agricultural finance, and marketing in distribution of produce and the relation of these facts to the problems of increasing cost of living.

7. To investigate the land conditions and land tenure with a view to working out better, more equitable, and fairer systems of dealing with this problem so vital to the social and the economic well-being of the country.

8. To call from time to time such conferences or conventions as will help to carry out the above-mentioned objects.

Resolutions adopted unanimously by the conference are in effect as follows:

I. MARKETING.

1. *Standardization.* It is recommended that the Department of Agriculture be authorized to evolve and establish standards of measure and quality for all merchantable farm products, it being believed that through the interstate commerce clause and the weights and measures clause Congress has ample powers to prescribe standard packs and grades of all farm products both in country and city districts; and that Congress immediately provide by law for federal inspection of commodities of large volume, such as grain, hay, and cotton, to the end that all the classifying and grading of articles of interstate or foreign commerce may be made uniform.

2. *Information.* Greater effort and, if need be, more generous expenditure is urged in order that reports and estimates made by governmental agencies may be more accurate in giving information as to acreage and condition and output of farm products. But it is insisted that there shall be equal energy in collecting and disseminating corresponding reasonable information covering the manufacturing, commercial, and other trade conditions which reflect the rate of consumption of each given farm product. It is recommended that the Bureau of Foreign and Domestic Commerce and the Office of Markets coöperate in the collection and dissemination of information which will enable the producer fairly to price and wisely to distribute his products; and that this information be furnished while the farmer has produce to sell and not after he has sold it to organized traders and speculators.

3. *State market commission.* It is strongly urged that all states which have not yet created a marketing commission do so at the earliest possible time, in the interest of their own producers and consumers as well as in the common interest.

4. *Terminal markets.* Federal legislation for interstate shipments is favored, preferably by stationing federal inspectors at all the large terminal markets. This should require commission merchants, and other receivers of farm products on consignment, to keep a uniform system of accounts, giving each shipment a number in rotation, showing date, from whom received, date of sale, name of purchaser, and price; to forward a transcript of the entry promptly to the shipper; and to keep all such records open at all times for examination by a shipper or any state or federal official.

II. RURAL CREDITS.

1. *Aid and direction in reclamation.* The conference recommends to Congress the appointment of a commission of five members to investigate the methods

and results of land settlement in certain sections of this country where settlement of cut-over lands, drainage of swamp land, and irrigation must be undertaken; and also the causes and results of tenant farming in the entire country; and to prepare a report with recommendation as to the measures needed to remove the obstacles to acquiring farms and the modifications needed in the successful land settlement systems of other countries to ensure their effective operation here.

2. *Banking facilities.* The conference endorses only such legislation by Congress as will "provide for the soundest valuation and the most careful maintenance of true educational values, and only such legislation as is based upon self-help, careful auditing, a sound amortization plan and the coöperative principle of organization for rural credit banks. Such rural credit system should be created to aid: (a) Tenants who are in need of working capital and who are willing to form approved coöperative organizations under which moderate credit may be safely extended. (b) Tenants who have reached a financial condition which makes the purchase of land a safe risk, but who require larger loans and longer time than they can secure under the existing commercial credit conditions. (c) Landowners who desire to add permanent improvements without impairment of working capital."

The conference opposes "any legislation that suggests the wholesale distribution of government funds or the loaning of government credit, in such a way as to encourage land speculation, or land investments which the business experience of our people has shown to be hazardous. The conference, therefore, strongly endorses a practicable plan for rural credit. It just as strongly protests against any plan that will end mainly in real estate speculation and increase in land values to the disadvantage of actual settlers."

"Any plan adopted for aiding settlers by a better system of rural credit should be preceded by an effective plan for preventing the increase of land values that otherwise is certain to deprive the settler of intended aid. This is done in Ireland and elsewhere by fixing in advance the prices at which land shall be sold by owners. It is done in Victoria, Australia, and elsewhere by government purchase and resale to settlers. It might perhaps be done by an unearned increment tax on benefited lands. Whatever method may be adopted on investigation, this object of preventing speculation and providing that the actual settler, rather than the speculator, or so-called 'investor,' shall have the full advantage of improved credit, is the most needed preliminary step in a program of rural credit, reclamation and land settlement."

It is recommended that the conference be represented at Washington during the coming session of Congress, in the presentation of this phase of rural credits to the proper committee.

The chairman of the conference and the other officers who conceived the plan of the meeting and executed it with such conspicuous success were reelected for another year: chairman, Frank L. McVey, president of the University of North Dakota; treasurer, Charles McCarthy, of Madison, Wisconsin; secretary, Charles W. Holman, 230 South LaSalle St., Chicago. The *Proceedings*, printed in full in one volume, may be had of the secretary for one dollar.

JAMES E. BOYLE.

University of North Dakota.

FARM MACHINERY TRADE ASSOCIATIONS. The report of the Bureau of Corporations on *Farm Machinery Trade Associations* (Washington, 1915, pp. xvi, 368) is divided into seven chapters as follows:

Organization and Development of Associations; Wholesale Price Activities of Manufacturers' Associations; Efforts of Manufacturers' Associations to Reduce Costs; Activities of Manufacturers' Associations with Respect to Legislation; Concentration and Ownership of Wind-Stacker Patents; Restriction of Retail Trade to Retail Dealers; Prevention of Price Cutting among Regular Dealers.

The most important of these chapters is that on the Restriction of Retail Trade to Retail Dealers, which occupies one third of the report proper (excluding exhibits and indices). It shows that the activities of the farm machinery retailers in this matter have been very similar to those of the retailers in the lumber trade. The retailers have claimed that to the retail dealer belongs the retail trade, and they have directed their efforts to securing this end. As in other trades, efforts, in the first place, have been made by the retailers' associations to secure the coöperation of wholesale and manufacturing organizations in enforcing such a policy. Classification has been resorted to in the issuing of directories of regular dealers, and attempts have been made to persuade the commercial agencies to develop a more nearly correct classification of dealers. The retail associations seem to have been opposed to manufacturers' branch retail stores, and, to a lesser degree, even to direct sales in localities where the manufacturer had no agent.

The method of settlement of complaints against individual manufacturers has also been similar to that used in the lumber trade. The aggrieved dealer complains to the secretary of his association. It is the duty of this individual to verify the facts and endeavor to adjust the situation amicably with the manufacturer, collecting a commission on the sale for the aggrieved dealer or some other dealer in the locality where the sale has been made. Incidentally it has been the secretary's duty to secure a promise from the manufacturer that his future sales would be confined to the regular dealers. If the secretary was unable to effect a satisfactory settlement, the matter was submitted to the board of directors, or else to a grievance committee, which took up the case with the manufacturer or jobber complained of. Most differences seem to have been adjusted amicably.

Information regarding manufacturers and others who violated trade

ethics by selling direct seems to have been disseminated to a considerable extent by the farm machinery associations. At the same time this does not appear to have been done in as bald a manner as in the case of associations in the lumber trade. Moreover, following the decisions handed down by the courts against the publication of the names of wholesalers or manufacturers violating trade ethics, the policy of the various implement dealers' associations seems to have been to find a means of disseminating information to members regarding manufacturers and wholesalers unwilling to confine their trade to regular dealers without, at the same time, incurring legal liabilities. On the whole, however, the black-listing and boycotting of such parties seems not to have reached so high a stage of development as has been the case in the lumber trade associations.

Another problem to which the farm machinery associations have directed their attention is the maintenance of profitable prices among the regular dealers. Manufacturers and other wholesalers are generally opposed to dealers who are habitual price cutters. Several of the local associations have made attempts to secure price agreements among the dealers, but have not been particularly successful. At conventions much stress has been laid upon price maintenance, and it has been advocated in numerous editorials in the *Implement Dealers' Bulletin*. In 1906, the National Wagon Manufacturers' Association determined to investigate terms with a view to bettering general conditions; and eventually there was evolved an organized movement to secure the maintenance of retail prices by educating dealers in the costs of doing business according to a plan of cost accounting advocated by the cost educational associations. Down to the present time, this movement has been most vigorously pushed. It has had most valuable results for the dealers and it is alleged that the study of costs is the most effective way of preventing price cutting. The reason lies in the fact that the computation of costs, which is recommended, supplies a figure at which the dealer can sell at a profit. However, this does not mean the establishment of uniform retail prices so long as each dealer bases his prices upon his own costs. Yet there can probably be no question but that the tendency of the cost system and its study is in the direction of preventing price cutting and of the maintaining a more satisfactory standard of retail prices generally.

The report on *Farm Machinery Trade Associations* is extremely valuable as a study of retail organizations in general. The hope

may be expressed that at a later period other studies of various trade associations will be made which will afford further information in regard to the character and activities of such bodies.

Tulane University.

W. H. S. STEVENS.

The Department of Commerce issues a Special Consular Report, No. 74, on *Japanese Cotton Goods Industry and Trade*, by Consul George N. West (Washington, 1915, pp. 12).

In the Special Agents Series have appeared No. 101, *Commercial Organizations in Switzerland*, by A. J. Wolfe (pp. 28); No. 102, *Commercial Organizations in the United Kingdom*, also by A. J. Wolfe (pp. 53), containing a description of British manufacturers' and employers' organizations; and *China and Indo-China Markets for American Lumber*, by F. H. Smith (pp. 39).

Suggestions for Parcel Post Marketing has been issued as a Farmers' Bulletin by the United States Department of Agriculture (Washington, Jan. 14, 1916). This furnishes information for persons who desire to sell or buy produce by parcel post. Various forms of containers are shown by illustration.

The Bureau of Navigation has issued a new edition of *Navigation Laws of the United States* (Washington, May 18, 1915, pp. 585), containing the provisions of the Seamen's act of March 4, 1915. The last edition was published in 1911.

The *Annual Report of the Secretary of the Interior* for 1915 (Washington, pp. 21) is especially devoted to the subjects of water power, leasing of public mineral lands, and the developing of mineral resources. The latter topic covers some 60 pages and is illustrated by helpful charts.

The Interstate Commerce Commission has made a *Report of Investigation of the Conditions Affecting the Production, Transportation, and Marketing of Crude Petroleum* (Washington, No. 7344, Dec. 10, 1915, pp. 510), dealing with common carrier pipe-line companies. A report on industrial concerns will subsequently be covered by the Federal Trade Commission.

The Directors of the Port of Boston have recently issued Bulletin No. 2, *The Use and Benefits to Massachusetts Manufacturers and Wage Earners of an American Merchant Marine* (pp. 14), and Bulletin No. 3, *Analysis of the Present Foreign Trade of the United States* (1916, pp. 19). By this latter bulletin it is hoped to "clear away the present

misunderstanding in regard to our large export trade. At the present time this country is engaged not in building up a permanent export business but in making profits."

The *Farmers' Market Bulletin*, issued by the North Carolina Agricultural Experiment Station, Vol. 2, No. 12, has an interesting account of the organization and work of the Carolina Potato Exchange. The Exchange supervises the grading of the product and looks after its distribution. "Members are prevented from spoiling each others markets." Successful experience during the past year leads to the belief that the undertaking will prove a permanent success.

In a bulletin issued by the Agricultural Experiment Station of the University of Illinois on *Prices and Shrinkage of Farm Grains*, by W. L. Burlison and O. M. Allyn (Urbana, Nov., 1915, No. 183, pp. 26), it is stated that the increase of prices of crops within the last few decades has not been so great as is generally believed. The average price for wheat for the 15 years preceding the financial crisis of 1894-1898 was as high as that for the period of 15 years succeeding 1898. Statistics show the prices by months.

Bulletin of Illinois Coal Mining Investigations, Vol. II, No. 1, is prepared by S. O. Andros (Urbana, University of Illinois, Sept., 1915, pp. 250). It has a bibliography of 15 pages.

Corporations

VALUATION OF A PUBLIC UTILITY. In order that the problem of investigating the rates of the Chesapeake & Potomac Telephone Company be clearly and adequately presented to the Public Service Commission of Maryland, Mr. Osborne I. Yellott, assistant general counsel of the commission, has prepared a series of analyses of the five important phases of the subject. The general method of procedure in each case has been: first, an exposition of the principles involved; second, a thorough consideration of the specific problem before the commission; and, third, conclusions and recommendations.

Notes on Fair Value (pp. 40) points out that rate making is an equitable process. The decisions of the Supreme Court in the *Smyth vs. Ames* case is upheld as being entirely logical and practical. All attempts to reduce the principles of rate making or valuation to fixed rules and formulas must inevitably prove futile.

Notes on Fair Return (pp. 30) sets forth five questions to be determined by the commission:

1. Fair value of the company's property.

2. Actual and prospective returns under existing rates.
3. Extent to which probable future returns may be inadequate or excessive.
4. Extent to which fairness of prospective returns may be affected by changes in the company's schedules of rates.

A table showing the fair return allowances made by various commissions in 72 different cases is appended.

Notes on Construction Overheads (pp. 79) considers "all those elements of cost which from their nature cannot satisfactorily be allocated or apportioned to any particular article of property." The following items are included and the propriety and extent of their allowance are discussed:

Contractor's profits; Omissions and contingencies; Brokerage and discount; Interest during construction; Engineering and superintendence; Law expenditures during construction; Taxes during construction; General executive costs; Insurance during construction; Miscellaneous construction expenditures.

Elements of cost commonly considered as overheads but which are not embraced here are: organization, franchises, patent rights, other intangible capital.

Notes on Intangibles (pp. 41) distinguishes between "Intangibles" and "Construction overheads" and takes account of such elements of cost as relate to the business in its entirety rather than to the actual cost of any particular article of physical property. Such intangibles when once shown to exist are to be considered property and allowed a reasonable return for exactly the same reasons as tangible property. But, the burden rests with the company "to establish by proof, and not by mere supposition or theory, the fact that such intangibles exist and have a real and substantial value."

Notes on Depreciation (pp. 127) has for its central idea that the question of depreciation is simply one part of the real problem of determining "what is fair between the public and the public service corporation in the specific case under consideration." Although there are several fundamental principles of depreciation which are universally applicable, it is useless to try to devise some curve, formula or theory which will apply to all cases alike.

MARTIN J. SHUGRUE.

The Interstate Commerce Commission under date of December 10, 1915, reported the results of its investigation of the *Ownership, Management, and Control of the Little Kanawha Railroad Company* (Washington, No. 7378, pp. 560-649). Maps as well as statistical tables are included.

Bulletin No. 83 of the Bureau of Railway Economics (Washington, 1915, pp. 50) deals with *Comparative Railway Statistics, United States and Foreign Countries, 1912*. Part I gives the tabular matter for 38 countries and states. Part II brings together in a series of tables the significant averages and ratios. An introduction considers the comparability of railway terms in different countries and endeavors to reconcile the differences in interpretation.

The Board of Railway Commissioners of North Dakota has made a *Compilation of Laws Governing Railroads, Grain Warehouses, Express, Telephone, Telegraph, Gas, Light, Heat, and Power Companies, Storing Warehouses, and Commission Merchants together with the Rules Adopted by the Board Relating to Public Utilities* (Bismarck, 1915, pp. 156).

A reply-brief of the railroad companies represented by the Presidents' Conference Committee on *Federal Valuation of the Railroads in the United States* may be had upon application to Thomas W. Hulme, 937 Commercial Trust Bldg., Philadelphia, Pa.

Two pamphlets on railway mail pay have been received: *Report on Railway Mail Pay*, by the committee on postal affairs of the Merchants' Association of New York (Oct., 1915, pp. 60); and *An Analysis of the Moon Bill. Why It Does not Offer a Just or Practicable Basis of Payment to the Railroads for Carrying the Mails*, issued by the Committee on Railway Mail Pay, 75 Church St., New York (pp. 31).

A monthly bulletin of the St. Louis Public Library for July, 1915, deals with the question of *The Regulation of the jitney Bus, a Discussion of the City Ordinances*, by A. L. Bostwick, librarian of the Municipal Reference Branch (St. Louis, Room 206 City Hall, pp. 192-222). This contains a large amount of tabulated matter in regard to the ordinances of various cities throughout the country.

Pamphlets dealing with the railway problem in general are:

What is the Matter with Railway Regulation? by Samuel O. Dunn, editor of the *Railway Age Gazette* (Reprinted from the *North American Review*, Nov., 1915, pp. 736-748).

The Government and Business, an address delivered at Louisville, Ky., October 15, 1915, also by Mr. Dunn (pp. 18).

"*The Great American Experiment*," by Clifford Thorne, chairman of the State Board of Railroad Commissioners of Iowa, an address delivered at San Francisco, October 12, 1915 (pp. 10).

Address to the American Association of Traveling Passenger Agents,

by Howard Elliott, president of the N. Y., N. H. & H. R. R. (Oct. 4, 1915, pp. 15).

An Address to the Young Men's Christian Association, Chamber of Commerce, and Twentieth Century Club of Middletown, Conn., Oct. 15, 1915 (pp. 16), also by Mr. Elliott.

Relation of the Railroad and Its Securities to Land Values, by Fairfax Harrison, president of the Southern Railway Co., an address delivered December 9, 1915 (pp. 8).

Some Observations on Modern Tendencies, an address delivered at San Francisco, October 13, 1915, by Theodore N. Vail, before the Railroad Commission of California and the National Association of Railway Commissioners (pp. 36).

Public utility reports have been received as follows:

Forty-First Report of the Railroad Commission of Georgia, 1914 (pp. 301).

First Annual Report of the Public Utilities Commission of Illinois, 1914. Vol. I, *Orders and Decisions* (pp. 1422); Vol. 2, *Transportation Statistics* (pp. 359).

Labor

Bulletin 162 of the United States Bureau of Labor Statistics is a report on a *Vocational Education Survey of Richmond, Virginia*. This survey was made under direction of a committee organized by the National Association for the Promotion of Industrial Education which had the coöperation of the federal Bureau of Labor Statistics, the United States Bureau of Education, the Russell Sage Foundation, and the school authorities of Richmond. The committee concludes that for white girls and women employed in manufacturing and mercantile pursuits the operations can be learned more quickly in the factory than in the school. There is need of department store and salesmanship training in part time and continuation classes. The decision as to the need of a girls' trade school for Richmond is adverse.

Bulletin 174 is a *Subject Index of the Publications of the United States Bureau of Labor Statistics up to May 1, 1915* (Washington, Sept., 1915, pp. 233). It covers 25 annual reports, 12 special reports, 173 bulletins, and about 50 volumes of miscellaneous reports.

In Bulletin No. 179, entitled *Industrial Poisons Used in the Rubber Industry* (Oct., 1915, pp. 64), Dr. Alice Hamilton describes the various processes and occupational dangers attached to the various stages of manufacturing. The report is based upon an investigation

of 35 factories located in 15 cities in 9 states, covering practically every branch of the rubber industry.

Bulletin 180 is a study of *The Boot and Shoe Industry in Massachusetts as a Vocation for Women* (Oct., 1915, pp. 109). The more important shoe centers were investigated—Boston and Chelsea, Brockton and nearby towns, Lynn and Beverly, and Marlboro. Visits were made to 80 factories and the rates of pay and earnings were taken from payrolls of 18 factories including 4400 women operatives. The proportion earning less than \$8 in the week when the greatest numbers were employed varied from 24 per cent in Brockton to 42 per cent in Lynn, while the proportion earning over \$10 a week varied from 34 per cent in Marlboro to 54 per cent in Brockton. The bureau notes that three points stand out: "The fluctuations in the industry which debar many of the workers from steady employment; factory unemployment or temporary lack of work for those who nominally are steadily employed; and, partly as a consequence of this irregularity of work, the low weekly wage even of steady and experienced workers when earnings are distributed over the year."

The *Fifth Annual Report of the Director of the Bureau of Mines* (Washington, 1915, pp. 106) notes that a bulletin containing statistics of coal mine fatalities reported by state mine inspectors since the beginning of inspection by each state, covering the mining of more than 89 per cent of all the coal produced in the United States since 1807, will soon be published.

In the *Twenty-third Annual Report of the Bureau of Statistics and Information of Maryland, 1914* (300 Equitable Bldg., Baltimore, 1915, pp. 273) the bulk of the volume is given to the question of child labor. On pages 133-138 is a list of industrial diseases reported to the state board of health.

The Industrial Bulletin of the Colorado Fuel and Iron Company for January 3, 1916, is devoted to a discussion of a new plan of industrial representation which has been established.

The Industrial Accident Board of California has published Vol. I of *Reports of Decisions* (Sacramento, Cal., 1915, pp. 711).

Other labor pamphlets to be noted are:

Accidents at Metallurgical Works in the United States, 1913 and 1914, Technical Paper 124, compiled by Albert H. Fay (Washington, Bureau of Mines, pp. 28).

Papers on Accident Prevention Read at Round Table Conferences

during the First Annual Industrial Safety Exposition of Ohio, Safety Bulletin Vol. II, No. 3. (Columbus, Industrial Commission of Ohio, March, 1915, pp. 80.)

The Effect of the Minimum Wage Decree on the Brush Industry in Massachusetts is published as Bulletin No. 7 by the Minimum Wage Commission of Massachusetts (Boston, Sept., 1915, pp. 14). Bulletin No. 9 is entitled *Wages of Women in Women's Clothing Factories in Massachusetts* (Boston, Sept., 1915, pp. 38). There is also published, under date of August 5, 1915, *Statement and Decree Concerning the Wages of Women in Retail Stores in Massachusetts*.

Five Years' Work and Progress of the Joint Board of Sanitary Control in the Cloak, Suit and Skirt and the Dress and Waist Industries. An Experiment in Industrial Self-Control, October 31, 1910 to October 31, 1915 (31 Union Sq., New York, pp. 15). A special report by the director of this board, Mr. George M. Price, has also been issued on *Fire Hazards in Factory Buildings* (Dec., 1915, pp. 16).

Sixth Annual Report of the National Employment Exchange (30 Church St., New York, Sept., 1915, pp. 20).

First Report of the Ten Hour Law Bureau of Maryland, May, 1912, to January, 1914 (304 Equitable Bldg., Baltimore, pp. 28); and the *Second Report, January, 1914, to January, 1915* (pp. 41).

Employment and Compensation of Prisoners in Pennsylvania (Harrisburg, Penal Commission, 1915, pp. 112).

Digest of Labor Laws of Oregon, by O. P. Hoff, state labor commissioner, revised to June 30, 1915 (Salem, 1915, pp. 32).

Money, Prices, Credit, and Banking

MAKING AND USING OF INDEX NUMBERS. Bulletin No. 173 of the federal Bureau of Labor Statistics, *Index Numbers of Wholesale Prices in the United States and Foreign Countries* (Washington, 1915, pp. 329), is divided into two parts: The Making and Using of Index Numbers (pp. 110), and Index Numbers of Wholesale Prices in the United States and Foreign Countries (pp. 210). Professor Wesley C. Mitchell of Columbia University is responsible for part I, the Bureau for part II.

The bulletin opens with a statement of its "aim and scope":

The aim of this bulletin is to make the index numbers of wholesale prices currently published in the United States and foreign countries more accessible, more intelligible, and therefore more useful.

To this end the leading series of index numbers, compiled by official bureaus, financial journals, and private investigators both at home and abroad are described in detail. The history of each series, the source from

which quotations are taken, the number and description of the commodities included, the methods of averaging, the statistical results obtained, etc., are set forth as far as the facts could be learned, so that anyone wishing to use the figures in question may know how they are derived and what they mean. This systematic description of the series now being published is preceded by a critical analysis of the various methods employed to measure changes in the level of prices—an analysis which shows the advantages and the defects of these methods, the purposes for which the different index numbers may properly be employed, the reasons for the discrepancies which usually appear when two or more series for the same time and country are put side by side, the safeguards which are necessary in making comparisons between different series, and the confidence which index numbers merit as measures of price fluctuations.

The "leading series" described in part II of the bulletin are 32 in number:

United States	6	India	1
Australia	1	Italy	2
Austria-Hungary	2	Japan	1
Belgium	1	Netherlands	1
Canada	1	New Zealand	1
Denmark	1	Norway	1
France	4	Russia	1
Germany	4	Spain	1
Great Britain	3		

Each series is described under twelve categories:

- Publication in which the series appears;
- History of the series;
- Source of quotations;
- Base period;
- Prices—how shown and computed;
- Number and class of commodities;
- Description and grouping of commodities;
- Substitutions and additions;
- Interpolations;
- Weighting;
- Testing (by comparison with other numbers and methods);
- Tables of results (actual figures).

At the end of part II is an account of the Conference on Index Numbers of the International Institute of Statistics, September, 1911, and a select bibliography of additional index numbers. The work is all admirable, careful, critical, and methodical, but does not lend itself to extended review.

The statement of the aim and scope of the bulletin might lead the reader to believe that part I, *The Making and Using of Index Numbers*, is a mere popular introduction to the subject. It is, in-

deed, one of the best popular expositions imaginable, but it is much more. It contains an immense amount of original work and is a real contribution bristling with suggestive ideas.

For example, chapter III, *The Characteristics of Price Fluctuations*, opens up an almost untouched field in the application of modern statistical method to the subject of prices. This chapter makes use of the data contained in Bulletin No. 149. An examination is first made of the year-to-year individual percentage fluctuations and then of fluctuations over longer periods. In discussing the year-to-year fluctuations, concentration (about the median) is illustrated by a table of decils of a chain index number. A chart makes this concentration very apparent.

Having discussed the distribution of fluctuations by means of decils (which of course divide each frequency curve into ten parts of equal area), a (total) frequency curve is itself given. This is based upon the percentage changes in 5578 cases of change in individual prices from one year to the next. A "normal curve" is then fitted and comparisons made. The concentration is shown to be considerably greater in the actual than in the normal distribution. This is, however, somewhat accentuated by the extremely large number of cases of no change in price (12.494 per cent), which naturally do not correspond to any tendency to mass around any average, but merely to inertia.

Almost more interesting, however, than the great concentration is the fact that the curve is apparently asymmetrical. The median and the mode stand at ± 0 , while the arithmetic mean is $+ 1.36$ per cent. The greatest fall is 54.6 per cent, while the greatest rise is 103.3 per cent. This asymmetrical distribution is probably due in part to the fact that the method of treatment tends to give the data a sort of quasi-heterogeneity. To be strictly homogeneous, the variations of each year would have to be measured from the arithmetic mean of the percentage movements of that year—not from 100 per cent. To illustrate—if the average percentage movement one year was 10 per cent rise, we would not expect to find a normal distribution around 100 but around 110 per cent.

However, everything seems to point to the fact that, even were this slight source of uncertainty eliminated, the distribution would still be asymmetrical. In table 2 (decils of the chain index numbers) the decil columns are added and averaged. Now, though this treatment does not give exactly the same results as if the percentages were each year taken as of the median and not of 100 per cent,

the results are decidedly startling. Moreover, the asymmetrical distribution is clearly seen in the individual years. The averages for the 23 years are:

Greatest fall	— 38.0	6.....	+ 2.3
1st decil.....	— 11.0	7.....	+ 4.3
2nd	— 6.2	8.....	+ 7.8
3	— 3.5	9.....	+ 14.6
4	— 1.4	10.....	+ 57.0
Median	+ 0.5		

Arranging these results as all plus (88 per cent fall equals + 62 per cent), we have the following table:

I	II	III	IV
62.0	162.1	156.2	157.0
89.0	112.9	114.0	114.6
93.8	107.1	107.3	107.8
96.5	104.1	103.8	104.3
98.6	101.9	101.8	102.3
100.5			100.5

Running down column I and then up column IV are the decil percentages. Column II is the percentage that 100.5 (the average median) is of column I. Column III is the percentage that column IV is of 100.5 (the average median). The similarity of results in columns II and III is remarkable.

Now, though the above procedure may be difficult to defend, the data certainly seem to suggest that the distribution may be more nearly symmetrical and normal about the geometric than about the arithmetic mean. Or, more accurately, that the distribution of the logarithms of the percentage changes may be more nearly symmetrical and normal than the distribution of the percentage changes themselves. Professor Mitchell has touched upon this possibility in a number of places. For example, after remarking that the decil chart is "capable of giving the mind a more just impression of the characteristics of price changes than any other device," he adds (p. 16, n. 2) "except perhaps a similar chart drawn to a logarithmic scale." On page 81 he notes that the geometric mean "unlike the arithmetic mean, is not in danger of distortion from the asymmetrical distribution of price fluctuations."

To really test out the nature of the logarithmic distribution would involve a very considerable amount of work, but if it were found to be more nearly normal than the natural distribution that fact

would surely shed new light on the question of the most desirable average. What is the *most probable value* for the general percentage movement? If the "errors" (variations due to the influence of particular commodity factors) were distributed *arithmetically* according to the normal law, the arithmetic mean—least mean square deviation—would certainly seem indicated. But if the logarithms of the percentages and not the percentages themselves follow more closely the curve of error, is not the geometric mean indicated? From that point the sum of the squares of the *logarithms* of the percentage deviations will be a minimum; and is not this what sound theory should demand?

Having discussed the characteristics of year-to-year fluctuations, chapter III passes on to an examination of longer periods. A chart is given (p. 22) illustrating the distribution of percentage variations from 1912 to 1913 and from 1890-99 to 1913. The greater concentration of the one-year fluctuations is very pronounced, though the charting of the raw percentages instead of the percentages of each mean tends to exaggerate the effect a little.

The conclusions of chapter III are: "(1) that year-to-year changes in the price level can be measured with good prospects of success, because such variations show a [comparatively] symmetrical distribution and a marked degree of concentration about their central tendency; but (2) that measurements of variations between years far apart have a more problematical value."

In chapter IV, section 5, Base Periods, these conclusions come up in connection with a discussion of the relative merits of fixed base and "chain" index numbers. One-year fluctuations are more concentrated than those over longer periods, and, moreover, "most users of general-purpose index numbers prefer to make their comparisons with recent dates." On the other hand, though "chain relatives for successive years can be multiplied together to form a continuous series, it is not easy to give the later members of the series a concrete meaning." Hence "the recent reaction against index numbers made by striking arithmetic means and in favor of index numbers made by adding actual prices."

A curious and interesting characteristic of chain numbers is illustrated in the table on page 41. Chain numbers for the bureau's data calculated by the "long" method (true calculation *de novo*) are placed side by side with "short" chain numbers (percentage that the bureau's number, base 1890-99, is each year of the preceding year). There

are in all 23 years. In two cases the long relatives and short relatives (add 100 to each number in the column) are the same; in two cases the short are greater; but in *nineteen* cases the long are greater. The long chain rises more rapidly and falls less rapidly than the short chain. In other words, the chain numbers draw away (upwards) from the fixed base numbers.

This condition can come about only through a greater tendency to rise and a less tendency to fall (in percentages) with the smaller relatives than with the larger relatives.¹ There is a tendency for any movement away from the average movement to slacken its rate. The extreme case where the slackening of rate amounts to a complete reversal is rather interesting. Let the relatives for two commodities for three years be:

I	II	III
100	80	100
100	120	100

Now the chain numbers show the second year to be 100 per cent of the first and the third $104\frac{1}{6}$ per cent of the second, or, multiplying, the third to be $104\frac{1}{6}$ per cent of the first *in the face of the fact that each individual price is the same in the third as in the first year.*

Chapter IV, section 6, "The numbers and kinds of commodities included," and chapter V, "A comparison of the leading American index numbers for the years 1890 to 1913," cover the less theoretical question of the effect of number and kind of commodities upon the resulting index number. To illustrate the effects of *number*, six different index numbers (242, 145, 50, 40, 25, 25 commodities) are constructed from the bureau's data. A chart (p. 50) shows the extent of the discrepancies. Can these discrepancies be accounted for except as the results of random differences in sampling? This question leads to a full examination of the action of different *kinds* of commodities—raw or manufactured; mineral products, forest products, animal products, or farm crops; consumers' goods or producers' goods; etc.

Chapter V continues the subject. It is a detailed study of seven

¹ A movement in one of a number of relatives has, if the one happens to equal the arithmetic mean, the same percentage effect upon a long or a short chain. If the one happens to be greater than the arithmetic mean its fluctuation influences the short more than the long. If it be less than the arithmetic mean its fluctuation influences the long more than the short.

American index numbers—Bureau of Labor Statistics original, Bureau of Labor Statistics revised, Bradstreet's, Gibson's original, Dun's, Gibson's present, and The Annalist's. These numbers are shown to contain, in the above order, the following percentages of foods—24, 28, 29, 42, 50, 100, 100. These food percentages are largely the key to their differing actions. In general any number will correlate more closely with an adjacent number than with a more remote one—"the prices of agricultural products are largely dependent upon the yield of each season's harvests, while the prices of most other articles are less dependent upon weather conditions than upon the activity or depression of business."

After a critical valuation of these seven series, a new series is proposed (p. 112):

It seems feasible to construct an American series which would present a stronger combination of good qualities as a general-purpose index number than any now existing. The original quotations might be collected from the records of the Bureau of Labor Statistics and Bradstreet's, a list of commodities more complete than Bradstreet's and better balanced than the bureau's might be drawn up, the use of actual prices might be adopted from Bradstreet's and Dun's, the several commodities might be weighted by physical quantities after Dun's fashion, but with the use of a criterion more appropriate to wholesale prices, and the whole process of construction might be set forth with the frankness characteristic of the Annalist and the bureau.

Part I closes with eight general conclusions:

1. Year-to-year variations are capable of being measured with a close approximation to accuracy.
2. Accuracy decreases with increase of time.
3. Methods of construction should be adapted to the particular purpose for which the results are to be used. A single series can not conceivably be devised which will serve all uses equally well.
4. The best form for a general-purpose series is a weighted aggregate of actual prices.
5. The more commodities that can be included in such an index number the better, provided the system of weighting is sound.
6. Probably the best weights to apply are the average physical quantities of the commodities bought and sold over a period of years without reference to the number of times their ownership is changed.
7. *Relatives* of individual commodity prices should be published.
8. The *actual* prices of as many commodities as possible should be published, even though some of the quotations may not now be available for use in making an index number.

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Banking Opportunities in South America, by William H. Lough, published by the Department of Commerce as Special Agents Series No. 106 (Washington, 1915, pp. 156), embodies the results of a six-months investigation. There are chapters on underwriting and selling securities, English and German banks in South America, the banking situation in Chile and in Peru, notes on banking practice, earnings, expenses and profits, and improvements in foreign-trade financing; a diagram of Chile-London exchange, 1898-1915; and, at the close, a bibliography of a page. Mr. Lough notes that British banks have taken the lead in financing the development of the principal countries and German banks next. There is no evidence that the German government has subsidized its banks, but these have developed independently through the organization of business methods. Mr. Lough concludes that Peru and Chile offer favorable conditions for the use of American banking capital.

The Post Office Department has prepared a pamphlet on *The United States Postal Money-Order System* (Washington, 1915, pp. 156). A survey of the system, with the purpose of ascertaining its condition and advancing its efficiency and economical administration, was conducted by a departmental committee under the direction of the Postmaster General. Some 10 pages are given to the history of the money-order service.

According to Bulletin 181 of the United States Bureau of Labor Statistics, *Wholesale Prices, 1890 to 1914*, wholesale prices in the United States were but slightly lower in 1914 than in 1913.

On the subject of rural credits the following pamphlets have been received: *Hearings before the Subcommittee of the Joint Committee on Rural Credits* (64 Cong., 1 Sess., Dec. 4, 1915, Part 4, pp. 141-154) containing the statement of Hon. A. M. Dockery; and *How to Finance the Farmer. Private Enterprise—Not State Aid*, by Myron T. Herick and R. Ingalls, published by the Ohio State Committee on Rural Credits and Coöperation (Cleveland, Dec. 1, 1915, pp. 58).

An annotated edition of the *California Bank Act, 1915*, has been published by the California Bankers Association (1064 Mills Bldg., San Francisco, pp. 168, 60c. in paper, \$1.10 in leather).

A new compilation and publication of the *Kansas Banking Law, 1915*, has been made by the bank commissioner (Topeka, pp. 64).

There have been received the *Proceedings of the Twentieth Annual Convention of the Maryland Bankers Association*, held June 22-24,

1915 (Secretary, Charles Hann, Merchants-Mechanics' Bank, Baltimore, pp. 121); and *Proceedings of the Twenty-first Convention of the California Bankers Association*, held May 27-29, 1915 (Secretary, Frederick H. Colburn, 1064 Mills Bldg., San Francisco, pp. 262).

Banking reports received recently are:

Fourteenth Annual Report of the Commissioner of Banking of West Virginia, for 1914 (pp. 135).

Twenty-third Annual Report of the Secretary of the State Banking Board on the Nebraska Building and Loan Associations (Lincoln, 1915, pp. 153).

Reports on the Condition of the State, Private and Savings Banks of North Carolina (Raleigh, North Carolina Corporation Commission, 1915, pp. 162).

Sixteenth Annual Report of the Kansas Building and Loan Associations, 1914, published by the Kansas bank commissioner (Topeka, pp. 70).

Annual Report of the Board of Bank Commissioners of New Hampshire (Concord, 1915, pp. 394), which contains a brief summary of legislation in regard to New Hampshire bank commissioners with the names of all commissioners who have served since 1837.

Annual Report of the Commissioner of Banking and Insurance relative to Savings Banks, Trust Companies, and State Banks of Discount and Deposit of New Jersey for 1914 (Trenton, pp. 342).

Annual Report of the Superintendent of Banks of New York relative to Savings and Loan Associations, 1914 (Albany, pp. 923).

Public Finance

THE NEW YORK REVENUE SITUATION.—New York State and particularly New York City are confronted with the most serious fiscal problems that have faced them in a long time. Last year for the first time in several years, the state was compelled to resort to a direct tax for the purposes of its budget. This tax amounted to approximately \$17,000,000, nearly 70 per cent of which was borne by New York City. As soon as it was known that the direct tax for state purposes would be levied, public attention was centered upon the tax problem, and agitation for tax reform was started in several quarters.

To appreciate the significance that is attached to the direct tax for state purposes in New York, it is necessary to understand the policy of New York State in the matter of separation of sources. Ever since 1880 the state has been gradually constructing a system of special taxes, with a view to obtaining revenues from these "indirect" sources,

and to leaving the "direct" (general property) tax for local purposes. It may be said to be the settled policy of New York that the state shall look to sources other than the general property tax for needed revenue.

Notwithstanding this policy, the state is now confronted with a situation in which the special taxes are insufficient to meet the ever-increasing budget. The same forces that are pushing up the per capita cost of government throughout the rest of the United States are at work in New York State. The demand of the people for new services and for better service on the part of the state government has caused the per capita cost of the government to increase faster than the per capita wealth. Moreover, the unusually large expenditures of the state of New York for public highways and barge canals have advanced the per capita cost of government to a height reached by very few states in the Union.

The expenditures for the general purposes, exclusive of interest on canal and highway debts, etc., have increased from about \$7,000,000 in 1885 to about \$42,000,000 in 1914, or an increase of nearly 500 per cent in 30 years. In the meantime the population of the state has increased only 82 per cent and the assessed value of property liable to taxation only 274 per cent.

Were the increased burden spread over the entire tax base, the situation would be less critical. Under the New York system of partial separation of sources, however, any increase in the tax burden is borne largely by one class of wealth, *viz.*, real estate. In some localities, especially New York City, the seriousness of the revenue situation is accentuated by two unusual conditions. In the first place, New York City must now pay the price of its past habit of paying part of its current expenses by the issue of bonds. Under this policy, the city has piled up a tremendous debt. The present administration has adopted the "pay-as-you-go" policy, and while this new plan promises in time to remedy the unhappy financial condition in which the city now finds itself, at the same time there is imposed upon the budget of the next few years a heavy additional burden.

In normal times, the combined rise in the tax rate resulting from the increased cost of state government and the adoption of the "pay-as-you-go" policy would place a heavy burden upon real estate. At the present time, however, when there is a marked depression in real estate values, the increased burden is particularly heavy. The most urgent agitation for tax reform has come from the real estate interests. It has been unfortunate, however, that much confusion has been cast into the eyes of the public in regard to the real estate situation. The

fact is that real estate in some sections of New York City has suffered a sharp decline and is paying more taxes than it can bear without destroying capital value, while in other sections of the city, real estate is rapidly increasing in value and could bear a larger proportion of the cost of government.

Two fiscal problems, therefore, confront both the state and the localities: the one is a need of more revenue; the other is the urgent need of equalizing the tax burden. It is believed by many of those who have studied the problems that both of these needs can be met by the same measure, but there is quite a wide divergence of opinion as to which of several suggested plans should be adopted.

The points upon which the greater number of students seem to agree are: first, that the vestige of the personal property tax still remaining upon the statute books should be abolished; second, that before increasing the rates upon any of the sources now being taxed, we should devise a plan of reaching certain well-known evidences of tax-paying ability that are now almost entirely escaping. The following are the principle sources that are now escaping: intangibles of wealthy individuals and corporations escaping either because of peculiarities in the New York tax law or because of the breakdown of the general property tax; foreign corporations doing large amounts of business in the state, but escaping almost entirely as a result of unusual conditions in New York City as well as the peculiar court decision known as the McLean case; manufacturing corporations, enjoying unusual privileges in New York State, but paying less proportionately than in almost any other state in the Union; salaries of highly paid business and professional men.

No reform has been enacted, but several proposals will be laid before the legislature during the present session. The committee appointed by Mayor Mitchell, of which Professor Seligman is the chairman of the executive committee, looks favorably upon two plans: first, an abilities tax, to be composed of three parts—a business rentals tax, a habitation tax, and a salaries tax; second, a state income tax.

The Joint Legislative Committee on Taxation, of which Senator Ogden L. Mills is chairman, has been at work for six months and has just written its report for the legislature. This report will be published within two weeks, but the conclusions of the committee can not yet be made public. It is known, however, that some of the members of the committee strongly favor the income tax. This plan contemplates a 2 or 3 per cent tax on the income of individuals above \$1600, and upon the income of general business corporations; the tax to be collected by the state, but to be returned to the localities according to

the assessed value of real estate in each locality. It would displace the present personal property tax. At the recent public hearings most of the witnesses, including representatives of many classes of business, recommended the income tax as the best solution for New York's present problem.

The committee has also favorably considered the so-called "abilities" tax suggested by the mayor's committee, but is inclined to the opinion that this tax, while possessing considerable merit for the needs of New York City, would not meet the needs of the smaller localities of the state. Both committees have also considered the classified personal property tax, but a majority of the members of each committee feel that this tax could not reach a sufficiently large proportion of the sources now escaping. The whole financial problem, both of the state and of the localities, is to be thoroughly discussed in the legislature within the next two months.

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The *Annual Report of the Director of the Census for 1915* (Washington, pp. 29) promises the early issue of a volume on the financial statistics of states similar in scope to the series on the financial statistics of cities. Another work in progress is the preparation of a series of mortality tables based on the population of 1900 and 1910 and the mortality statistics of intervening years.

The Guaranty Trust Company of New York City has published a new edition of *The Federal Income Tax Law and Rulings Affecting Individuals and Fiduciaries* (pp. 67). This contains not only an index of the law but an index to the rulings.

In the *Twenty-fifth Annual Report of the New York Tax Reform Association for 1915* (29 Broadway, New York, pp. 8) a summary is given of tax amendments to constitutions in Kentucky, Maryland, Massachusetts, and New Mexico in 1915.

Pamphlets on the question of a tariff commission may be obtained from the Tariff Commission League, 1322 First National Bank Bldg., Chicago.

The Insurance Department of New York issues its annual pamphlet on *Fees and Taxes Charged New York Insurance Companies by Insurance Departments of Other States for 1916* (Albany, pp. 51).

Pages 24-49 of the *Municipal Year Book of the City of New York*,

1915 (Municipal Reference Library, 500 Municipal Bldg., New York, pp. 154, 15c.) are devoted to the subjects of finance and taxation.

Under date of June 22, 1915, the Department of Finance of New York City published a brief summary of the *Constitutional Provisions, Legal Enactments, and Court Decisions Determining New York City's Debt within the Debt Limit* (pp. 8).

The detailed financial operations of the city of New York may be found in a bulletin entitled *Financial Summary, September 30, 1915* (pp. 120) published by the city department of finance, W. A. Prendergast, comptroller.

The National Shawmut Bank has issued a pamphlet entitled *A State Tax on Incomes* (Boston, 40 Water St., Jan., 1916, pp. 15). It notes that opposition to the principle of the income tax has very largely subsided and that from now on discussion is likely to concern itself with the administrative features of the tax.

The *Eighth Annual Report of the Statistics of Municipal Finances* of Massachusetts (Bureau of Statistics, Boston, 1915, pp. 301) contains three charts illustrating the trend of municipal expenditures, of debt and assessed valuation, and showing the volume of certification of notes by months during a period of five years.

The Massachusetts state forester (6 Beacon St., Boston) has issued *The New Massachusetts Forest Taxation Law Explained and Printed in Full* (pp. 43). This deals with the new law passed in 1914. It describes the purpose of the new act, how it works, and the new taxes including the forest land tax, forest commutation tax, and forest product tax. Illustrations show what kinds of land pay the several taxes.

The Colorado Taxpayers' Protective League in coöperation with the city council and auditor of the city and county of Denver have been publishing a series of reports in order to illustrate the new system of accounting whereby the budget is set forth in a more intelligible form. It is hoped that an experiment of this sort lasting over a period of six months will lead to an adoption of the system. The third report carries the figures of 1915 through September 30 (pp. 35). A pamphlet entitled *Uniform System of Accounts for the City and County of Denver, Issue of 1916* (pp. 81) contains definitions of terms, classification of accounts, general instructions as to methods of keeping the records, and text pertaining to what shall be included under each separate account. A *Manual of Accounting and Business*

Procedure for the Auditor's Office of the City and County of Denver (pp. 55) sets forth in detail the methods and forms suggested for the use of the auditor in developing, with minimum effort, the information required by the "uniform system of accounts."

The Bureau of Municipal Research of Toronto also issues a *Budget for 1915* (pp. 23). Receipts and expenditures are rearranged in order to show actual costs of services rendered and of things purchased. The pamphlet is illustrated with diagrams.

The California State Tax Association has published a pamphlet on *The Problem of High Taxes in San Francisco* (1118 Hobart Bldg., San Francisco, pp. 120). This is a discussion of some of the "avoidable causes of waste and inefficiency in transacting the city's business," the governmental organization of San Francisco, and "the taxes paid by land and improvements and by personal property" (p. 19).

The *Fourth Annual Report of the Board of Tax Commissioners of Rhode Island, January 1, 1916* (Providence, pp. 106) is especially devoted to the subject of the inheritance tax. The commission was authorized to report upon new sources of revenue and submits a draft of a proposed inheritance tax law for Rhode Island. The report includes a set of inheritance tax tables showing the classification of heirs and rates of exemption in different states. The board will gladly fill requisitions for copies of the part dealing with inheritance taxes.

Extracts from Proceedings of the State Tax Commission of New Mexico, at a session held in July, 1915, at Santa Fe, have been printed (pp. 92).

There is also in print the *Proceedings of the Commission on Taxation of Indiana* (Secretary, Fred A. Sims, Frankfort) held in Indianapolis, May 25-June 3, 1915. Professor William A. Rawles is one of the five commissioners. The pamphlet received gives a verbatim transcript of the evidence.

Further reports of the state tax commissions received are: from Alabama, for the year ending September 30, 1914 (pp. 106); *Third Annual Report of the Colorado Tax Commission* for the year 1914 (pp. 154); and from New York for 1914 (pp. 690).

Demography

The Annual Report of the Director of the Census for 1915 (Washington, pp. 29) states that there is in progress the preparation of a

statistical monograph on cancer and a statistical directory of defective, dependent, and delinquent classes. This will show the cost of maintenance per inmate. The preparatory work on the decennial census of religious bodies will be begun as soon as possible. Legislation is recommended to authorize the decennial collection of statistics of marriage and divorce.

The Bureau of the Census has published *The Census of the Deaf and Dumb, 1910* (Washington, pp. 8).

Insurance

LIFE INSURANCE INVESTMENTS AND FARM MORTGAGES. The subject for discussion at the ninth annual meeting of the Association of Life Insurance Presidents was the investment of funds of life insurance companies (see *Proceedings of the Ninth Annual Meeting of the Association of Life Insurance Presidents*, New York, 1915, pp. 146). During the past year, Mr. Robert Lynn Cox, the general counsel and manager, has conducted a thorough investigation of the amount of such funds invested in farm mortgages. The investigation included 126 companies, the real estate mortgages of which amounted to 97 per cent of all such loans held by American life insurance companies. Real estate mortgages, during the years 1904 to 1914, increased two and one half times, amounting at the last-named date to \$1,706,000,000. This represented 34.58 per cent of the total assets of American life insurance companies, and was exceeded in amount only by the investments in bonds, which amounted to \$1,981,751,698 or 40.16 per cent of the total assets. Stocks during the past decade have fallen in amount to \$90,000,000 less than one fourth of the amount for 1904. Of the 148 companies from which data were obtained, 17 make loans only on farm property, 15 only on real property in cities, towns and villages, while the remainder, 116, loaned on both urban and farm property. Of the total mortgage loans, 39.03 per cent were on farms in the United States, 59.24 per cent on other real property in the United States, and 1.73 per cent were on real estate mortgages in Porto Rico, Canada, and other foreign countries.

Statistics were collected in respect to the geographical distribution of the loans, which showed that less than 1 per cent of the farm mortgages were held in the Middle Atlantic States, while 86 per cent of such mortgages were in the northwestern group of states. In general, the farm loans in the eastern states are small, in the central, northern, and southern states larger, but in the southwestern

and northwestern states largest. However, the mortgage loans on real estate other than farms are greatest in the eastern or New England and Middle Atlantic states. The explanation is offered that savings banks and private capital have supplied the loans on farms in the older and more populous sections. It is shown that about 40 per cent of the mortgages were on farms and about 60 per cent on other real property, but the latter loans, based upon the census valuation of the property, represent a lower percentage of the total value of the property.

There is a very close correlation between the total amount loaned on farm mortgages in the particular states and the total value of the farm lands. In the eight states in which loans in each amount to \$3,000,000 or over, only two exceptions in this respect are found, *viz.*, Illinois, being fifth in loans and first in farm values, and Texas, being eighth in farm loans and third in farm values.

There is a decided variation in the interest rates received—from over 8 per cent in Utah and Idaho to 5.16 and 5.19 per cent in Illinois and Massachusetts. The average interest received has been 5.55 per cent.

Comparing these loans on farm mortgages with those reported to the Comptroller of the Currency in 1914 held by 26,765 banks and trust companies, it appears that the life insurance companies are the larger owners of farm mortgages.

Washington University.

W. F. GEPHART.

The *Opinions of the Solicitor for the Department of Labor dealing with Workmen's Compensation from August, 1908, to April, 1915*, have been brought together in a single volume (Washington, pp. 811). There is a complete digest and index of opinions.

Bulletin 185 of the federal Bureau of Labor Statistics, *Compensation Legislation of 1914 and 1915* (Oct., 1915, pp. 397), is a supplement to Bulletin No. 126 issued two years previously. A comparative analysis of existing workmen's compensation laws is presented in the form of a large folding chart.

The Industrial Accident Board of Massachusetts has issued Bulletin No. 13, *The Sequel to the Invitation to Employers to Organize for Safety* (Boston, Oct., 1915, pp. 18). This is a comparative study showing a saving in compensation payments as the result of safety efforts by certain employers. Bulletin 14 is entitled *Tables Used by the Industrial Accident Board for the Determination of Weekly Com-*

pensation, Length of Term and Present Value of Payments by Lump Sum (Oct., 1915, pp. 24).

Insurance pamphlets received are as follows:

Origin of the Standard Fire Insurance Policy, an address delivered before the Insurance Society of New York, Nov. 22, 1911, by Elijah R. Kennedy (pp. 24).

Health Insurance. Standards and Tentative Draft of an Act (New York, American Association for Labor Legislation, Nov., 1915, pp. 26).

The Ohio State Insurance Manual. Rules and Rates Effective July 1, 1915 (Columbus, Industrial Commission of Ohio, 1915, pp. 185).

Court Decisions and Attorney General's and Department of Labor Opinions Relative to the Workmen's Compensation Act (St. Paul, Minn., Department of Labor and Industries, Bulletin No. 11, pp. 52).

Thirty-ninth Annual Report of the Commissioner of Insurance and Banking of Texas for the Year ending August 31, 1914, Pertaining to Insurance (Austin, Tex., 1915, pp. 275).

Savings Bank Life Insurance, by Burton Mansfield, insurance commissioner of Connecticut, a paper read at the meeting of the National Convention of Insurance Commissioners, Monterey, California, Sept. 23, 1915 (pp. 14).

Fourth Annual Report of the Industrial Insurance Department of the State of Washington for the Twelve Months Ending September 30, 1915. The Workmen's Compensation Act (Olympia, 1915, pp. 119).

PERIODICALS

The REVIEW is indebted to Robert F. Foerster for abstracts of articles in Italian periodicals, and to R. S. Saby for abstracts of articles in Danish and Swedish periodicals.

Theory

(Abstracts by W. M. Adriance and A. N. Young)

BELLOM, M. *La théorie de la productivité finale et le profit*. Journ. des Econ., Nov., 1915. Pp. 6.

An estimate of Professor J. B. Clark's *Essentials of Economic Theory* (1907). Mainly an adverse judgment of Clark's treatment of profit.

BILGRAM, H. *The equivalent concept of value*. Quart. Journ. Econ., Nov., 1915. Pp. 6.

Practical considerations in opposition to the concept of value as an absolute thing.

COOLEY, C. H. *The progress of pecuniary valuation*. Quart. Journ. Econ., Nov., 1915. Pp. 21.

DIEHL, K. *Zur Kritik der Kapitalzinstheorie von Böhm-Bawerk*. Jahrb. f. Nat. Oek., III, 50, 5, 1915. Pp. 31.

A review of Böhm-Bawerk's final formulation of his theories, viz., in the edition of 1914 of "Capital and Interest," the edition of 1909-1912 of the "Positive Theory," and the article published shortly before his death entitled "Macht oder ökonomisches Gesetz." Diehl writes as one whose methodological point of view is diametrically opposed to that of Böhm-Bawerk. He is warm in his praise of the latter's critical and historical work, but feels compelled to reject his constructive theory *in toto*.

EINAUDI, L. *Achille Necco*. Rif. Soc., Aug.-Oct., 1915. Pp. 6.

Necco, killed in battle in the Alps last September, was one of the most promising of the young Italian economists.

ENGLÄNDER, O. *Die Erkenntnis des Sittlich-Richtigen und die Nationalökonomie*. I and II. Schmollers Jahrb., 38, 3 and 4, 1914. Pp. 122.

A study on the frontiers of economics, psychology, and ethics. An attempt at an ethical foundation for economic science and economic policy.

HERRMANN, A. *Geburtenzunahme und Lohntheorie*. Soz. Praxis, Sept. 16, 1915. Pp. 2.

Argues for a wage system which will promote the growth of population.

KOEHLER, W. *Die Objektivität. Untersuchungen über die logische Struktur des Werturteils*. Schmollers Jahrb., 39, 1, 1915. Pp. 60.

LORIA, A. *La comparazione sociologica*. Riv. Ital. di Sociol., May-Aug., 1915. Pp. 6.

- MURRAY, R. A. *L'applicazione dei procedimenti matematici alle scienze sociali nel momento attuale.* Giorn. d. Econ., Oct., 1915. Pp. 19.
- OBERFOHREN, E. *Die Idee der Universalökonomie bei Boisguillebert und Argenson.* Weltwirtsch. Archiv, Apr., 1915.
- SPANN, O. *Ein Beitrag zur volkswirtschaftlichen Theorie des Krieges und der Kriegskosten.* Jahrb. f. Nat. Oek., III, 50, 5, 1915. Pp. 17.
- TIBURTUS, J. *Der Begriff der Bedürfnisse. Seine psychologische Grundlage und seine Bedeutung für die Wirtschaftswissenschaft.* Jahrb. f. Nat. Oek., III, 48, 6, 1914. Pp. 70.

A study of the psychological foundations of economics. The following writers are cited: Brentano, Cùhel, Döring, Gossen, Grimm, Gurewitsch, von Hermann, von Ihering, Kraus, Lexis, Meinong, Münsterberg, Oppenheimer, Paulsen, von Philippovich, Roscher, Sax, Schäffle, von Schmoller, Schumpeter, Suabedissen, Vierkandt, Wagner, Wahle, von Wieser, and Wundt.

- DEL VECCHIO, G. *Lineamenti generali della teoria dell' interesse.* Giorn. d. Econ., Nov., 1915. Pp. 54.

A survey of contemporary interest theories and a clearing of the ground for the author's own theory, which will be set forth in another instalment of his article.

Economic History, United States

(Abstracts by E. L. Bogart)

- CURWEN, S. *Journal of a journey from Salem to Philadelphia in 1755.* Essex Inst. Hist. Coll., Jan., 1916. Pp. 8.
- Gives information as to condition of roads.
- DANIELS, G. W. *American cotton trade with Liverpool under the Embargo and Non-Intercourse acts.* Am. Hist. Rev., Jan., 1916. Pp. 12.
- HINKE, W. J., ed. *Report of the journey of Francis Louis Michel from Berne, Switzerland, to Virginia, October 2, 1701-December 1, 1702.* Va. Mag. Hist. & Biog., Jan., 1916. Pp. 43.
- Contains much of economic interest. This account has been translated for the first time.
- MARTZOLFF, C. L. *Land grants for education in the Ohio Valley states.* Ohio Archaeol. & Hist. Quart., Jan., 1916. Pp. 12.
- MILLIS, H. A. *Economic aspects of Japanese immigration.* Am. Econ. Rev., Dec., 1915. Pp. 17.
- MORRELL, J. *Account of a trip to Ballston and Saratoga Springs in August, 1813.* Penn. Mag. Hist. & Biog., Oct., 1915. Pp. 9.
- Interesting account of means of travel.
- RANDALL, J. G. *The Virginia debt controversy.* Pol. Sci. Quart., Dec., 1915. Pp. 25.
- Traces the history of the debt from 1861 to date.

- RING, W. *Development of the American merchant marine.* Pro. Acad. Pol. Sci., Oct., 1915. Pp. 9.

A brief sketch of changes since 1812.

- RYAN, J. H. *An old time postal distribution in Illinois.* Journ. Ill. State Hist. Soc., Apr., 1915. Pp. 4.

Mail routes about 1850.

- SMITH, W. *The colonial post-office.* Am. Hist. Rev., Jan., 1916. Pp. 18.

- WHITE, H. F. *The Mormon road.* Wash. Hist. Quart., Oct., 1915. Pp. 8.

An account of the route followed by the Mormons.

- Whaling off the Alaskan coast. From the journal of Jack Hadley of Point Barrow, Alaska.* Bull. Am. Geog. Soc., Dec., 1915. Pp. 17.

A sketch of the industry from 1848 to date. It is now almost a thing of the past.

Economic History, Foreign

(Abstracts by Clive Day)

- BALLARD, A. *The theory of the Scottish burg.* Scot. Hist. Rev., Oct., 1915. Pp. 13.

- BELLET, D. *Le commerce allemand et les raisons de son développement.* Rev. Sci. Pol., Aug., 1915. Pp. 26.

A thoughtful article, with good bibliographical references.

- ELY, R. T. *Russian land reform.* Am. Econ. Rev., Mar., 1916. Pp. 8.

- FASCHETTI, A. *La politica commerciale italiana e i suoi effetti sull' economia nazionale.* Giorn. d. Econ., Nov., 1915. Pp. 28.

- HALTENBERGER, M. *Primitive carriers in land transportation.* Bull. Am. Geog. Soc., Oct., 1915. Pp. 17.

- LOWY, R. L. *Japan's part in the war.* Finan. Rev. Rev., Dec., 1915.

- LYBER, A. H. *The Ottoman Turks and the routes of oriental trade.* Eng. Hist. Rev., Oct., 1915. Pp. 11.

"The shifting of the trade-routes was done, not by the Turks, but in their despite and to their disadvantage."

- MILLETT, F. B. *Craft-gilds of the thirteenth century in Paris.* Queen's Quart., Oct.-Nov.-Dec., 1915. Pp. 22.

A study based on Boileau's *Livre des Métiers*, with glossary and bibliography.

- SILVESTRI, G. *La produzione della Germania (1871-1913).* Riv. Intern., Oct., 1915. Pp. 31.

- THOMPSON, J. W. *The commerce of France in the ninth century.* Journ. Pol. Econ., Nov., 1915. Pp. 30.

Emphasizes volume and variety of commerce in a period ordinarily neglected.

TOENNIES, F. *Die historisch-geographischen Richtungen der Neuzeit*. Welt-wirts. Archiv, Oct., 1915. Pp. 12.

A broad survey of the period 1492-1914.

A step in the progress of Paraguay. Bull. Pan Am. Union, Nov., 1915.

Agricultural Economics

(Abstracts by John Lee Coulter)

FLOHR, L. B. and MOORE, C. T. *Suggestions for parcel post marketing*. Farmers' Bull. No. 703. Pp. 19.

A careful outline dealing with postal requirements, parcel post zones, size of packages, containers, packing for shipment, agreeing on prices, business arrangement as to remittances, the economics of this type of marketing, and details as to quality and appearance of produce and standards of quality. Illustrated.

HERRICK, M. T. and INGALLS, R. *How to finance the farmer*. Pamphlet of the Ohio State Committee on Rural Credits, Cleveland, Dec. 1, 1915. Pp. 58.

A clean-cut statement covering the general rural credits movement, the old farm mortgage craze, building and loan associations, landschafts, bond and mortgage companies, and an exposition of rural coöperative banking, advocating private enterprise as against state aid.

HILL, J. S. *Organized credit for farmers*. Address delivered Nov. 16, 1915, at Durham, N. C. Pp. 20.

A careful outline of plans for coöperative credit for farmers, covering mortgage credit and personal credit and showing the logical place of the building and loan association in rural life.

KILE, O. M. *The farm water supply*. Circular 43, Extension Dept., College of Agriculture, Morgantown, W. Va. Pp. 16.

Economic and health considerations briefly considered. Illustrated.

LOYD, O. G. *Farm leases in Iowa*. Bull. 159, Iowa Experiment Station, Ames, Ia. Pp. 50.

A study of relationship of landlord and tenant; profitable farming, fair division of returns, various methods of renting, copies of forms used, etc.

LUBIN, D. *Direct dealing between producer and consumer*. Sen. Doc. 240, 64 Cong., 1 Sess. Pp. 40.

An outline of a plan for direct dealing between farmers and consumers in cities, through the parcel post service, using mail order methods.

MCCATCHEN, G. *The case for cotton*. Bull. of the Univ. of South Carolina, No. 43, Pt. V, Oct., 1915. Pp. 16.

An economic study of the advisability of producing cotton, using fertilizer, etc., at different price levels.

MACRAE, H. *Vitalizing the nation and conserving human units through the development of agricultural communities*. Ann. Am. Acad., Jan., 1916. Pp. 8.

General analysis of problem with suggestion for formation of commission for study and planning of better rural community life.

VALGREN, V. N. *True and false economy in mutual insurance*. Journ. Prtg. Co., Crawfordville, Ind., Aug. 19, 1915. Pp. 12.

Primarily economic study (full of exact facts) of farmers' mutual insurance companies.

WILSON, E. E. *The business side of farming*. Bull. 196, College of Agriculture, Corvallis, Oregon. Pp. 44.

Third bulletin of a series dealing with the economic problems of farmers. Part I, by J. A. Bexell, dean of the School of Commerce, was on *Farm Records*; part II, by Dr. Macpherson on *Practical Problems in Rural Economics*; this, part III, deals with rural law, principally the laws dealing with titles and ownership of farm lands.

Coöperative dairies in Denmark. Mo. Bull. Econ. & Soc. Intell., Dec., 1915.

The needs of American farm women. Mo. Bull. Econ. & Soc. Intell., Dec., 1915.

A practical national marketing organization and rural credits system for the farmers of the United States. A hearing before the State Department June 21, 1915. With addenda by David Lubin. Oct. 19, 1915. Pp. 16; 20.

Symposium dealing with general theory of organization and views on many details by several competent witnesses.

Rport of the Joint Committee of the United States Senate and House of Representatives on Rural Credits. H. Doc. 494, 64 Cong., 1 Sess. Pp. 40.

Critical review of present credit facilities for farmers with statement of their needs and draft of proposed bill to provide a system of land mortgage credit under federal supervision.

Commerce

(Abstracts by M. T. Copeland)

BARRETT, J. *Practical Pan-Americanism*. N. Am. Rev., Sept., 1915. Pp. 11.

Influences and agencies which have helped to develop Pan-Americanism.

BOYLE, J. E. *Terminal market problems*. Quart. Journ. Univ. N. D., Jan., 1916. Pp. 9.

Digest of some official and non-official publications mainly on organized speculation; suggest federal regulation of grain trade.

BRESCIANI-TURRONI, C. *Sulla formazione dei prezzi a termine nelle borse dei prodotti*. Giorn. d. Econ., Sept., 1915. Pp. 34.

CHOPP, C. C. *Possibilities of export trade*. Wld. Wk., Nov., 1915. Pp. 2.

Broad, preliminary study necessary.

COLLINS, FISHER and SHERMAN. *Methods of wholesale distribution of fruits and vegetables on large markets*. Bull. U. S. Dept. Agri. No. 267., Aug. 16, 1915. Pp. 27.

Valuable information for shippers and for students of marketing methods.

DEL MAR, A. *How to sell machinery to Latin-America.* Engg. Mag., Dec., 1915. Pp. 16.

Rather general discussion of some problems in South American trade.

ELLIOTT, P. *Our foreign trade in farm and forest products.* Bull. U. S. Dept. Agri., No. 296, Oct. 23, 1915. Pp. 50.

Statistical digest.

FLANNERY, J. F. *Tank steamers.* Syren, Jan. 5, 1916. Pp. 3.

Historical; progress in construction.

FRIEDMANN, M. *Die deutsch-oesterreich ungarische Wirtschaftsgemeinschaft.* Schmollers Jahrb., No. 4, 1915. Pp. 16.

Movement for customs union; obstacles; advantages.

GARIBALDI, A. *L'esportazione del frumento dell' Australia.* Giorn. d. Econ., Oct., 1915. Pp. 29.

GOVAULT, E. *Influence de la conservation frigorifique des denrées périssables sur le prix de la vie aux Etats-Unis.* Journ. des Econ., Oct. 15, 1915. Pp. 11.

Based on report of U. S. Department of Agriculture.

HIATT, W. S. *United States united for trade in foreign lands.* Ry. Age Gaz., Jan. 7, 1916. Pp. 3.

Marketing advantages of French comptoirs; example for American manufacturers.

HUBBACK, J. H. *The government and the wheat trade.* Econ. Journ., Dec., 1915. Pp. 10.

Some aspects of the policy of British government in regulating wheat trade.

JACOBS, P. *Zucker industrie und Zuckerhandel im Kriegsjahre 1914-15.* Schmollers Jahrb., No. 4, 1915. Pp. 50.

Effect of war on sugar trade; government regulations.

JOHNSON, E. R. *War's bearing on American merchant marine.* Annalist, Jan. 10, 1916. Pp. 2.

Merchant marine needed; stimulative measures necessary.

KENNEDY, P. B. *The seaman's act.* Ann. Am. Acad., Jan., 1916. Pp. 12.

Provisions of act; problem of removing our competitive disability.

KIES, W. S. *The necessity for organization in international trade.* Econ. Wld., Dec. 18, 1915.

LOZÉ, E. *Les charbons Américains et leur exportation.* L'Econ. Franç., Jan. 1, 1916. Pp. 2.

Descriptive.

MARSH, A. R. *The beginning of the end of the United States Cotton Futures act.* Econ. Wld., Oct. 16, 1915. Pp. 2.

Although district court held act unconstitutional because it originated in Senate, it is believed that substantive portions are also unconstitutional.

MARVIN, W. L. *Pure fabric or labeling laws.* Bull. Nat. Assoc. Wool Mfrs., Oct., 1915. Pp. 24.

Cases cited to show advantages of British Merchandise Marks act; Australian practice; prevention of fraudulent advertising.

DE MÉRIEL, P. *L'industrie lainière en Espagne.* Journ. des Econ., Oct. 15, 1915. Pp. 13.

Facts concerning organization of the industry.

PAYEN, E. *La soie: sa production, sa consommation.* L'Econ. Franç., Sept. 25, 1915. Pp. 2.

Effects of war on silk trade.

SCHREIBMAN, F. *How to secure export trade.* Engg. Mag., Oct., 1915. Pp. 7.

Believes that wholesaler and commission house are not satisfactory export agencies for small manufacturers seeking trade in Europe.

SCHREIBMAN, F. *How to secure foreign trade.* Engg. Mag., Nov., 1915. Pp. 8.

Scheme for coöperative league of exporters.

SELWYN-BROWN, A. *Post-bellum minéral production.* Engg. Mag., Jan., 1916.

Sources of production; anticipates heavy demand.

SINGH, N. *The capture of German foreign trade.* Wealth of India, Sept., 1915. Pp. 5.

Steps taken by British to secure control of markets from which Germans are not shut off.

SORRELL, L. C. *Dislocations in the foreign trade of the United States resulting from the European war.* Journ. Pol. Econ., Jan., 1916. Pp. 51.

Minute and painstaking statistical comparisons of foreign trade since August, 1914, and in preceding four years.

WALTEMATH, K. *Russland und die deutsche Lebensmittelversorgung.* Zeitschr. f. d. ges. Staatswis., No. 3, 1915. Pp. 24.

Influence of Russo-German trade in food-stuffs on tariff policies; Russia the more dependent on this trade.

WEEKS, J. W. *The merchant marine.* Journ. Philadelphia Chamber of Commerce, Oct., 1915. Pp. 10.

Address by Senator Weeks criticising Seaman's act and advocating subsidy policy.

WIESINGER. *Der Aussenhandel Deutschlands mit Frankreich.* Annalen des Deutschen Reichs. No. 8, 9, 1915. Pp. 10.

Statistical analysis.

WYMAN, W. F. *Selling American goods.* Wld. Wk., Nov., 1915. Pp. 2.

Suggestions for selling goods in South America.

Advocates a commission for merchant marine. Greater N. Y., Nov. 22, 1915.

Criticises Ship Purchase bill and Seaman's act; favors appointment of a commission for investigation.

The American mercantile marine. Pro. Acad. Pol. Sci., Oct., 1915. Pp. 206.

A series of addresses and papers discussing the policy of the United

States government toward our mercantile marine—subsidies, Seaman's act, Ship Purchase bill, a merchant marine commission, and other topics; also several papers on relation of investments to foreign trade.

Canada's great waterway. Syren, Jan. 5, 1916. Pp. 6.

Recent improvement in St. Lawrence navigation.

Crisis in shipping on the Pacific. Com. Repts., Sept. 30, 1915. Pp. 5.

American trade in Pacific seriously menaced by withdrawal of Pacific mail steamers.

The dyestuff situation to date. Bull. Nat. Assoc. Wool. Mfrs., Oct., 1915.

American production increasing but inadequate; protective duty needed.

Japanese shipping and ship building. Syren, Jan. 5, 1916. Pp. 6.

Growth of shipbuilding facilities.

The official cotton standards of the United States. U. S. Dept. Agri., Service and Regulatory Announcement, No. 6, Jan., 1916, Pp. 32.

Explanation of method of preparing standards.

Shipbuilding capacity of the United States yards. Mo. Bull. Chamber of Commerce of State of N. Y., Dec., 1915. Pp. 12.

Results of special inquiry regarding present conditions and future prospects.

The Spanish fruit trade. Syren, Jan. 5, 1916. Pp. 4.

Methods of handling export trade.

Steamship company finance in war time. Syren, Jan. 5, 1916. Pp. 3.

Figures for numerous British companies.

The textile alliance plan. Bull. Nat. Assoc. Wool Mfrs., Oct., 1915. Pp. 12.

Arrangements for exports of wool manufacturers; effect of war on wool imports.

What of our merchant marine? Annalist, Dec. 13, 1915.

The world's coming tariffs and commercial treaties. Americas, Oct., 1915.

United States should prepare for negotiation of "up-to-date" commercial treaties with European countries.

Railways

(Abstracts by Julius H. Parmelee)

ALLIX, G. *Les chemins de fer britanniques et la guerre.* Journ. des Transports, Nov. 27, 1915. Pp. 5.

Description of the British war-railway organization from the French viewpoint.

ALLIX, G. *La crise des transports.* Journ. des Transports, Dec. 25, 1915. Pp. 6.

Serious transportation conditions in belligerent and neutral countries due to the war.

ALLIX, G. *L'exposition de San Francisco et les chemins de fer français.* Journ. des Transports, Sept. 25, 1915. Pp. 3.

ALLIX, G. *Quelques aperçus sur le trafic commercial des chemins de fer.* Journ. des Transports, Oct. 30, 1915. Pp. 4.

The efforts of French railways to approximate normal economic conditions in time of war.

ARNOLD, B. J. *Foundation principles of valuation.* Elec. Ry. Journ., Oct. 9, 16, 1916. Pp. 7, 4.

Prepared for the electric railway field.

ARTHUR, W. *Possibilities of steam railroad electrification.* Ry. Age Gaz., Jan. 21, 1915. Pp. 4.

Summary of chief reasons why electricity is replacing steam as a motive power.

BEATON, A. J. *The speed of trains on narrow gauge railways.* S. African Railways and Harbours Mag., Nov., 1915. Pp. 6.

With illustrations and diagrams. Trains on the South African railways have been considerably speeded up in recent years.

BEYER, O. S., JR. *Scientific train loading; tonnage rating.* Ry. Rev., Nov. 6, 1915. Pp. 5.

Mathematical analysis of various factors such as drawbar pull, train resistance, weather adjustments, etc.

BRYCE, G. *The real Strathcona. IV. The first railway to Winnipeg.* Canadian Mag., Oct., 1915. Pp. 5.

The only railway article in a biographical series.

BUREAU OF RAILWAY ECONOMICS. *Comparative railway statistics, United States and foreign countries, 1912.* Bull. 83, Oct., 1915. Pp. 78.

General railway statistics of the United States and 38 foreign countries, covering over 600,000 miles of line, or seven eighths of the world's mileage. Compares mileage, capital, income, wages, traffic, and various traffic averages.

BUSBY, L. A. *Regulation of public utilities.* Aera, Jan., 1916. Pp. 19.

The cardinal principles of regulation as applied to electric railways.

CARPENTER, G. M. *Railroading in the Argentine.* Railroad Herald, Jan., 1916. Pp. 4.

CONNOR, S. L. *Efficiency in track work.* Pro. N. E. Railroad Club, Dec. 14, 1915. Pp. 18.

Working of efficiency and bonus system on the Baltimore and Ohio.

CRANE, W. R. *Transportation in Alaska.* Pro. Ry. Club of Pittsburgh, Sept. 24, 1915. Pp. 28.

Covers ocean, river, rail, and highway transportation facilities. Illustrated with pictures and a map.

CROSSLAND, J. *The placing and design of railway termini.* Ry. News (London), Dec. 11, 18, 1915. Pp. 2, 2.

DAGGETT, S. *The Panama canal and transcontinental railroad rates.* Journ. Pol. Econ., Dec., 1915. Pp. 8.

Water competition in transcontinental traffic has become effective, at the same time that its limitations are being recognized.

DEWSNUP, E. R. *Recent financial investigations by the Interstate Commerce Commission.* Ann. Am. Acad., Jan., 1916. Pp. 15.

The New Haven, Frisco, St. Paul, and Rock Island investigations.

DIXON, F. H. *The railways and their masters.* Annalist, Jan. 10, 1916. P. 1.

Survey of federal and state laws enacted during 1915 in the field of railway regulation, also of important decisions.

DIXON, F. H. *The trend of railway earnings in the year 1915.* Ry. Age Gaz., Dec. 31, 1915. Pp. 3.

Revenues per mile in 1915 lowest since 1909. Increase in net revenue over 1914 due to deferred expenditures that must be made good in the future.

DIXON, G. D. *Preparedness and our railroads.* Ry. Rev., Dec. 11, 1915. Pp. 4.

Importance of the railways as a military asset; sufficient revenues should be allowed the railways to maintain a high standard of preparedness.

DUNN, S. O. *Education for railway work.* Ry. Age Gaz., Nov. 12, 1915. Pp. 3.

Emphasizes the value of the broadest possible education. One fourth of railway officials are college bred.

DUNN, S. O. *The Interstate Commerce Commission and the railroads.* Ann. Am. Acad., Jan., 1916. Pp. 18.

Describes the piecemeal development of public control over railways, and the serious conflict between state and federal policies. Advocates greater power for the Interstate Commerce Commission to meet both these factors.

FONTAINE, F. L. *The Boston & Maine tangle.* Mag. Wall St., Jan. 8, 1916.

Due largely to the incubus of unprofitable leases.

HAILEY, F. M. *The New York, New Haven & Hartford Railroad. Its financial status.* Moody's Mag., Jan., 1916. Pp. 4.

Historical resumé set forth without comment.

HAUSMEISTER, P. *Ueber die Vor- und Nachteile einer weiteren Vereinheitlichung im deutschen Eisenbahnwesen unter Berücksichtigung der württembergischen Interessen.* Zeitschr. f. ges. Staatswis., No. 3, 1915. Pp. 24.

Discusses pro and con the further unification of the several state railway systems of Germany. Concludes that further union is desirable, but should not proceed too suddenly.

HLATT, W. S. *The efficiency of French women as railway workers.* Ry. Age Gaz., Nov. 19, 1915. Pp. 3.

Some 25,000 women are at work on French railways under war conditions.

HLATT, W. S. *Europe struggling with a ship and car shortage.* Ry. Age Gaz., Jan. 21, 1916. Pp. 3.

HLATT, W. S. *French railway accidents in war time.* Ry. Age Gaz., Nov. 26, 1915. Pp. 2.

Remarkable freedom from accidents is shown by the records.

HIATT, W. S. *The railroad soldier at the front.* Ry. Age Gaz., Oct. 29, 1915.

Emergency railway building in France, and the reorganization of railway employees on a military basis.

HIATT, W. S. *Selling railway supplies to European countries.* Ry. Age Gaz., Nov. 12, 1915. Pp. 4.

HIATT, W. S. *A United States united for trade in foreign lands.* Ry. Age Gaz., Jan. 7, 1916. Pp. 4.

American railway supply firms must organize for export business.

HINES, W. D. *The conflict between state and federal regulation of railroads.* Ann. Am. Acad., Jan., 1916. Pp. 8.

The danger of too many masters over the railways. Calls for congressional action to define the limits of state interference with interstate business.

HOOPER, W. E. *The accounting system prescribed for railroads by the Interstate Commerce Commission.* Ann. Am. Acad., Jan., 1916. Pp. 10.

Descriptive and historical.

HULME, T. W. *Federal valuation of the railroads in the United States.* Ann. Am. Acad., Jan., 1916. Pp. 9.

Problems in valuation, and the steps involved in their solution.

JOHNSON, E. R. *The stockholder's wage.* Mag. of Wall St., Oct., 16, 1915.

Future prospects of the railway stockholder.

JOHNSON, L. E. *The relations of the railways and the public.* Ry. Age Gaz., Nov. 12, 1915. Pp. 4.

Wise and fair railway regulation versus government ownership.

LOWNHaupt, F. *Equipment bonds for investment.* Mag. of Wall St., Oct. 16, 1915. Pp. 4.

LYNN, S. *The life of a steel freight car.* Ry. Rev., Jan. 15, 1916. Pp. 3.

Steel cars can be maintained indefinitely through repairs.

KENNAN, G. *The Chicago & Alton case.* N. Am. Rev., Jan., 1916. Pp. 20.

A defense of the transactions of the Harriman syndicate in the purchase and reorganization of the Chicago & Alton.

MACNAB, E. S. M. *Electric lighting of railway passenger cars.* Pro. Canadian Ry. Club, Oct., 1915. Pp. 26.

MARKHAM, C. H. *Railroad development in the South, past, present, and future.* Ill. Central Mag., Dec., 1915. Pp. 4.

MORRIS, W. R. C. *Government railway of Alaska.* Canadian Engr., Aug. 12, 1915. Pp. 4.

With map and illustrations.

OLMSTEAD, A. S. 2D. *Do "cost of transportation" exhibits in railroad rate case show cost?* Ann. Am. Acad., Jan., 1916. Pp. 8.

Concludes that the cost of a particular service can not be ascertained.

PESCHAUD, M. *Les chemins de fer français et la guerre.* Rev. Pol. & Parl., Oct., 10, 1915. Pp. 22.

Description of the successive steps taken since July 31, 1914, to make the French railway system adequate both to the military and the economic problems of war.

PLANT, L. G. *The fuel department—a constructive criticism.* Pro. N. E. Railroad Club, Nov. 9, 1915. Pp. 11.

PROUTY, C. A. *The federal valuation of utilities.* Ann. Am. Acad., Jan., 1916.

Description of valuation work of Interstate Commerce Commission.

RAFTALOVICH, A. *Les chemins de fer en Allemagne.* L'Econ. Franç., Jan. 8, 1916. Pp. 3.

Adaptation by Germany of its own railways, and those of conquered territory, to war demands.

RIEDEL, S. S. *The locomotive of recent developments.* Pro. Central Ry. Club, May, 1915. Pp. 11.

With various illustrations.

ROULAND, E. *La chemin de fer de Bagdad.* L'Econ. Franç., Dec. 25, 1915. Pp. 2.

SCHULTZE, E. *Opfer der Eisenbahnunfälle in der Vereinigten Staaten von Amerika.* Archiv f. Eisenbahnw., Nov.-Dec., 1915. Pp. 18.

A study of the railway accident problem in the United States, written with very little comprehension of the facts, of their bearing, or of the underlying causes.

SHOUF, P. *Railway conditions in California.* Elec. Ry. Journ., Dec. 11, 1915.

Only one of 25 electric lines in California paid a dividend in 1915, owing to increased expenses and taxes and severe automobile competition.

SHOUF, P. *Relation of railways to agriculture.* Elec. Ry. Journ., Oct., 16, 1915. Pp. 3.

Electric railway practice in the development of farm traffic.

SNYDER, G. D. *The country's railroads and national defense.* Ry. Age Gaz., Nov. 26, 1915.

Based on our railway record in the Civil and Spanish wars.

SPOULE, W. *One shareholder to three railroad employes.* Santa Fe Mag., Oct., 1915. Pp. 2.

TOWNER, A. M. *When a railroad "goes broke."* Mag. of Wall St., Nov. 27, Dec. 11, 25, 1915, Jan. 8, 1916. Pp. 3, 3, 2, 2.

A series describing the steps in a railway reorganization.

VAN AUKEN, K. L. *Track maintenance. The big problem—labor.* Ry. Rev., Oct. 23, Nov. 20, 1915. Pp. 4, 4.

WEISS-BARTENSTEIN, W. K. *Bulgariens Verkehrspolitik und Verkehrswesen.* Archiv f. Eisenbahnw., Nov.-Dec., 1915. Pp. 20.

Account of recent improvements in the systems of railways and highways in Bulgaria.

WILLCUT, G. B. *The value of railway statistics.* Elec. Ry. Journ., Oct. 9, 1915. Pp. 3.

Written primarily for electric railway officials.

American railway securities held abroad. Ry. Rev., Jan. 1, 1916. Pp. 2.

Supplementary investigation by L. F. Loree indicates that nearly half a billion in American railway securities returned to this country from February 1 to July 31, 1915. The amount held abroad on the latter date is estimated as \$2,200,000,000.

Australia's first trans-continental railway. S. African Railways & Harbours Mag., Nov., 1915. Pp. 3.

The British government and American railroad securities. Ry. Gaz. (London), Dec. 3, 1915. P. 1.

Estimates that British insurance companies hold about £25,000,000 of American railway securities, while the holding of trust companies, banks, hospitals, and other institutions are probably much greater.

Cars and locomotives ordered and built in 1915. Ry. Age Gaz., Dec. 31, 1915.

Year signalized by extension of all-steel equipment, foreign orders, and rush of business in the last three months.

Electric rolling stock ordered in 1915. Elec. Ry. Journ., Jan. 1, 1916. Pp. 3.

Total number of new cars of all kinds purchased in 1915 was 2,782, the smallest in eight years.

New electric railway track built in 1915. Elec. Ry. Journ., Jan. 1, 1916. Pp. 2.

Fewer miles of new electric railway built in 1915 than in eight years—less than 600 miles. About 450 miles of steam railway line were electrified—the largest mileage on record. Total new electric mileage was 1050 miles.

New railway construction statistics for 1915. Ry. Age Gaz., Dec. 31, 1915.

Less than a thousand miles of new railway line built in the United States in 1915, the smallest figure in over half a century.

A premium on foresightedness. Annalist, Jan. 24, 1915. Pp. 2.

Advocates railway purchases of equipment in times of depression, when prices are low.

Proposed demands of enginemen and trainmen. Ry. Age Gaz., Jan. 14, 1916.

Analysis of demands for eight-hour basis of pay and for overtime pany at time and one half rate under consideration by the four national railway trainmen's brotherhoods.

Railroad bankruptcy. Ry. Age Gaz., Oct. 15, 1915. Pp. 3.

With map. One sixth of the railway mileage of the United States is being operated by receivers; two thirds of this bankrupt mileage lies in the Southwest.

Railroads in Turkey. Bull. Am. Geog. Soc., Dec., 1915. Pp. 7.

With map.

Railways and finance in 1915. Ry. News (London), Jan. 1, 1916. Pp. 16.

Summary of the important events of 1915 in the British railway world—finance, war effects, operations, legislation, personnel, etc.

Railways and the war: Enlistment of railwaymen. Ry. News (London), Dec. 11, 1915. Pp. 2.

Points out various devices by which British railway employees can be released for war service.

Railways improve agricultural interests. Ry. Journ., Nov., 1915. Pp. 13.

Symposium based on the replies of 45 railways to the following question: What is your company doing, and about what are your annual expenditures, for better farming and better farm life?

The railway situation from different viewpoints. Ry. Age Gaz., Dec. 31, 1915. Pp. 11.

Symposium of the views of six railway officials, one interstate commissioner, one state commissioner, one consulting engineer, and one railway contractor.

Railway statistics. Archiv f. Eisenbahnw., Nov.-Dec., 1915.

Switzerland, 1913; Hungarian state railways, 1913; Norway, 1913-1914.

Receiverships and foreclosure sales. Elec. Ry. Journ., Jan. 1, 1916. Pp. 2.

Electric railway mileage placed under receivership in 1915 was the largest in five years—1,152 miles, with \$79,600,000 outstanding securities.

Les résultats de 1914. Journ. des Transports, Nov. 27, 1915. Pp. 4.

A series, covering the state system.

Accounting

(Abstracts by Martin J. Shugrue)

ARNOLD, B. J. *Foundation principles of valuation.* Elec. Ry. Journ., Oct. 9, 16, 1915. Pp. 7, 4.

Purpose of valuation, detailed methods, overhead expenses, non-physical value, depreciation, amortization, the purchase clause; social aspect and needs of the industry are also treated.

BARROWS, W. P. *Receivers and public accountants.* Journ. Account., Jan., 1916. Pp. 14.

The function of accountants in preventing the necessity of receiverships and in furnishing information during financial readjustment.

BENTON, A. A. *Federal reserve rediscounts and requirements as to certain financial statements.* Trust Companies, Oct., 1915. Pp. 4.

The essential points which public accountants should consider in preparing for the Federal Reserve banks certified financial statements of borrowers.

CARROLL, H. W. *Municipal accounting and its relationship to government.* Journ. Account., Oct., 1915. Pp. 11.

Desirability of the general adoption of a model business system of municipal accounting for cities of the United States.

CHASE, H. S. *Recent changes in the "net balance" in the United States Treasury.* Journ. Account., Jan., 1916. Pp. 8.

Three serious errors in the preparation of the recently revised "Daily Statement."

COMSTOCK, H. G. *A practical accounting system for building and loan associations.* Am. Bld. Assoc. News, Nov., 1915. Pp. 5.

A brief outline of a simple and efficient system employed by The Englewood Mutual Loan and Building Association of Englewood, N. J.

CORY, C. L., VINCENT, W. G., and NORTON, W. J. *Inventories and appraisals of properties.* Pro. Am. Inst. Elec. Engrs., Sept., 1915.

FICKER, N. T. *Distributing overhead expense.* Engg. Mag., Nov., 1915. Pp. 7.

Sixth chapter of a series on "Distributing manufacturing expenses"; shows the importance of correctly distributing depreciation, insurance, taxes, interest, and tool, material, and special department expense.

FICKER, N. T. *Manufacturing expense distribution.* Engg. Mag., Jan., 1916.

Practical means for remedying the defects of the "machine unit system" in periods of depression. Final chapter.

FORBES, J. F. *The importance of accrued accounts.* Elec. Ry. Journ., Oct. 16, 1916. P. 1.

Operating accounts do not always state the entire facts.

GANTT, H. L. *Production, sales and fixing costs.* Engg. Mag., Jan., 1916.

A demand for a radical revision of methods in distributing costs.

GILBERT, F. L. *An "O. K." on Mr. McAdoo's accounts.* Annalist, Dec. 6, 1915. P. 1/2.

From a careful analysis, an expert accountant reaches the conclusion that the Daily Statement gives a true picture of the Treasury's condition.

GILLETTE, H. P. *The valuation of water works properties.* Engg. & Contracting, Jan. 5, 1916. P. 1.

Ninth in a series of 12 articles. Formulates and discusses the "separate plant theory of prorating."

HARRISON, F. *The relationship of railroads to land values.* Econ. Wld., Dec. 11, 1915. Pp. 2.

An address delivered before the Ninth Annual Meeting of the Association of Life Insurance Presidents, New York City, Dec. 9, 1915.

HARVEY, J. *Shipping accounts and the audit thereof.* Accountant, Nov. 27, 1915. Pp. 6.

Shipping accounts are not difficult to handle. Points out details and information which a young accountant would find helpful in performing an audit.

HATFIELD, H. R. *Some neglected phases of accounting.* Elec. Ry. Journ., Oct. 16, 1915. Pp. 4.

Fundamental valuation principle is not equity but attraction of capi-

tal. Author differentiates between capital expenditures and revenue charges, and analyzes problem of depreciation, capitalization of deficits, and franchise payments.

JURGENSEN, D. F. *Suggested form of inventory for valuation of common carrier property.* Journ. Assoc. Engg. Socs., Oct., 1915. Pp. 10.

Proposed skeleton form of inventory to be used in preparation of "Tentative valuation of common carrier property" and one form for analysis of each of five principal items of inventory.

KERR, D. S. *Consolidated balance sheets.* Accountant, Nov. 20, 1915. Pp. 3.

Facts the balance sheet of a holding company should show.

MURRAE, T. B. *Accounting for rents.* Elec. Ry. Journ., Dec. 25, 1915. P. 1.

Raises some interesting points to be discussed editorially in an early issue.

MOXEY, L. W., JR. *Bookkeeping and cost-keeping for electrical contractors.* Elec. Wld., Nov. 20, 1915. Pp. 2.

Describes an actual system showing forms and explaining how they are filled out.

MUNTZ, G. *Finding costs in the steel foundry.* Iron Trade Rev., Sept. 9, 1915.

NASH, L. R. *Depreciation reserves as affected by property growth.* Am. Econ. Rev., Mar. 1916. Pp. 20.

REED, D. A. *Assessing costs of extensions in a municipally owned plant.* Journ. Am. Water Works Assoc., Dec., 1915. Pp. 13.

Principles involved in assessing special benefits of certain civic improvements against abutting property.

ROYCE, F. P. *Capitalizing betterments.* Stone & Webster Pub. Serv. Journ., Oct., 1915. Pp. 3.

If betterments to public service companies result in advantages so great that both the company and the consumer will benefit, a proper part of their cost should be capitalized.

SPILLMAN, W. J. *Formulae for calculating interest on farm equipment.* U. S. Dept. Agri. No. 53., Oct. 12, 1915. Pp. 4.

If accuracy in cost accounting is to be obtained it is necessary to determine a proper basis for calculating interest on the various items of farm equipment. Concrete examples explained.

STAUB, E. E. *The designing of accounting systems.* Journ. Account., Dec., 1915. Pp. 8.

A general description of methods which have been found helpful in designing of accounting systems.

SUNLEY, W. T. *Treasury stock.* Journ. Account., Dec., 1915. Pp. 5.

Treasury stock should be treated as a deduction from capital stock issued rather than as an asset.

THOMSON, E. H. *Farm cost accounting.* Journ. Account., Dec., 1915. Pp. 20.

Essential farm records and their interpretation. Farmers Bulletin 661 is discussed and a portion of it reproduced.

WRIGHT, W. C. *Depreciation, interest and manufacturing cost.* Journ. Account., Nov., 1915. Pp. 3.

Is interest an element in manufacturing cost?

Accountants' papers and proceedings. Elec. Ry. Journ., Oct. 9, 1915. Pp. 9.

President Mitchell reviews year's work. Delegates discuss value of statistics in administration, taxation, passenger accounting, and various technical points of general interest.

Bay State Street Railway valuation. Elec. Ry. Journ., Dec. 4, 1915. Pp. 3.

Methods and results of eighteen months investigation of Massachusetts property in connection with case of proposed fare increase.

Conference on valuation. Elec. Ry. Journ., Nov. 13, 1915. Pp. 5.

Delegates in Philadelphia in sessions on November 10-12 under auspices of the Utilities Bureau discuss questions dealing with the reproduction theory and original cost theory, franchise values and land values.

Interstate Commerce Commission hearing on valuation. Ry. Age Gaz., Oct. 8, 1915. Pp. 2.

Railroads urge the commission to cooperate with them in establishing fundamental principles to be used.

Leonard Metcalf suggests improvements in public utility control and valuation. Engg. Record, Jan. 22, 1916. Pp. 2.

Constructive measures for simplifying litigation and coördinating efforts of commissions and corporations.

Minnesota commission offers novel valuation views. Engg. Record, Jan. 1, 1916. P. 1/2.

In a brief answering that of railroads before Interstate Commerce Commission reproduction is assumed to be instantaneous.

Papers presented before Central Electric Railway Association accountants. Elec. Ry. Journ., Dec. 11, 1915. Pp. 4.

At meetings in Detroit, Dec. 7-8, topics dealing with depreciation and appreciation, accrued accounts, journal entry ticklers, and shop orders were considered.

Valuation methods on the Big Four. Ry. Age Gaz., Oct. 15, 1915. Pp. 1.

Methods being followed in field work and in preparation of maps and profiles.

Public Utilities

(Abstracts by Ralph E. Heilman)

BROOKS, R. C. *Municipalization of the Berlin electric works.* Quart. Journ. Econ., Nov., 1915.

Explains the action of the Berlin city council of April 18, 1915, in voting to municipalize the Berlin electric works, and the plan developed for conducting the enterprise.

BUSBY, L. A. *Regulation of public utilities.* Elec. Ry. Journ., Nov. 27, 1915.

The present status of regulation, the basis of sound regulation, and the purpose of regulatory commissions.

CHAMBS, W. J. *The inefficiency of municipal ownership.* Stone & Webster Pub. Serv. Journ., Nov., 1915.

Presents facts and statistics concerning operation of municipal utilities in Seattle, which in the writer's opinion indicate a lack of efficiency.

HATTON, A. R. *Constitutional home rule and public utility legislation in Ohio.* Utilities Mag., Nov., 1915.

The struggle to secure and maintain for Ohio cities the right of municipal ownership.

HEILMAN, R. E. *The development by commissions of the principles of public utility capitalization.* Journ. Pol. Econ., Nov., 1915.

Traces the development by commissions of the fundamental principles of public utility capitalization.

HODGKINS, H. C. *Franchise of public utilities as they were and as they are.* Journ. Am. Water Wks. Assoc., Dec., 1915.

Changes in nature of franchises, wrought by utilities commission movement.

KEALY, P. J. *Municipal coöperation in utility management.* Elec. Ry. Journ., Oct. 23, 1915.

Discusses and illustrates four theories of coöperation between municipalities and privately owned utilities.

NICHOLAS, F. *Tendencies in central-station rate-making.* Elec. Wld., Oct. 23, 1915.

Maintains that the tendency of electric rates for a long period has been downward; and asks, How long can this process continue?

STERRETT, J. E. *The comparative yield on trade and public service investment.* Am. Econ. Rev., Mar., 1916. Pp. 8.

TALBOT, G. W. *State versus federal control of water power.* Pub. Serv., Oct. 15, 1915.

Opposes federal control; regards the Ferris bill as an unwarranted invasion of state sovereignty.

Jolting the jitney. Pub. Serv., Oct. 15, 1915.

Reasonable regulation puts jitneys out of business. The jitney business on the decline.

Raising the municipal fares in England. Stone & Webster Pub. Serv. Journ., Dec., 1915.

A report of the discussion of municipal ownership problems which occurred at the recent annual conference in London of the Municipal Tramways Association of Great Britain. Discussion is centered upon the rising costs of operation in war time.

Investments

(Abstracts by Arthur S. Dewing)

COLLIER, C. *How to analyze industrial securities.* Moody's Mag., Dec., 1915.

Points to unconservative promotions in the past and advocates caution now. The bonds of industrials, if issued, should be carefully protected.

GARDNER, J. *Foreign investments and the war.* Finan. Rev. Rev., Dec., 1915.

Approves large foreign investments by England, which should, so far as possible, be held as a reserve to be liquidated at the end of rather than during the war.

GIBSON, T. *Our securities after the war.* Moody's Mag., Oct., 1915.

An extremely keen analysis of security values after war. Agrees with economists that boom will continue a few years, then "the deluge."

HICKERNALL, W. F. *Where prices are subnormal.* Annalist, Dec. 20, 1915.

Interesting analysis of opportunity for foreign investment. Special attention is given to the situation of the Argentina railroads.

Corporations and Trusts

(Abstracts by Arthur S. Dewing)

SALIERS, E. A. *Some financial aspects of the International Mercantile Marine Company.* Journ. Pol. Econ., Nov., 1915.

Gives accurate account of factors determining the ill success of the company down to the war.

SELWYN-BROWN, A. *The Missouri Pacific reorganization plan.* Moody's Mag., Dec., 1915.

SELWYN-BROWN, A. *Reorganizing the International Steam Pipe Company.* Moody's Mag., Nov., 1915.

Brief statement of promotion (not accurate), conditions leading to failure, and proposed plan. Correctly diagnoses failure as due primarily to lack of technical skill.

In receivers' hands. Annalist, Dec. 20, 1915.

Brief statement of the capitalization of the railroads in or emerging from receivership.

Labor and Labor Organizations

(Abstracts by George E. Barnett)

ANDREWS, J. B. *Physical examination of employees.* Am. Journ. Pub. Health, Vol. V, No. 12. Pp. 5.

Objection to physical examinations would be much lessened by provision for sickness insurance.

CARTER, G. R. *The sequel of the Welsh coal strike.* Econ. Journ., Dec., 1915.

The strike has strongly promoted syndicalist ideas.

CLARK, L. D. *Workmen's compensation in the federal Congress*. Journ. Pol. Econ., Oct., 1915. Pp. 14.

Reviews the legislation and the proposed compensation laws for federal employees and for workmen in interstate commerce.

CRUEGER. *Die deutschen Genossenschaften während des Krieges*. Jahrb. f. Nat. Oek., III, 50, 1, 1915. Pp. 38.

The effect of the war on each of the forms of coöperative association.

DOUGHERTY, N. F. *Mutual benefit association on the Pennsylvania*. Ry. Age Gaz., Dec. 10, 1915. Pp. 3.

The association is made up exclusively of Pennsylvania Railroad employees, and is opposed to strikes.

FITCH, J. A. *Probing the causes of industrial unrest*. Survey, Dec. 18, 1915; Jan. 1, 1916. Pp. 7, 6.

Reviews of the reports of the United States Commission on Industrial Relations.

GAEBEL, K. *Hilfe den Textilarbeitern!* Soz. Praxis, Nov. 11, 1915. Pp. 5.

The deplorable conditions among the textile workers due to the war necessitate relief.

GOMPERS, S. *Labor history in the making. The 1915 A. F. of L. convention*. Am. Federationist, Jan., 1916. Pp. 18.

GRAHAM, I. J. *Working hours of women in Chicago*. Journ. Pol. Econ., Oct., 1915. Pp. 9.

Statistical study of the working hours of Chicago women, based on official reports.

HIATT, W. S. *The efficiency of French women as railway workers*. Ry. Age Gaz., Nov. 19, 1915. Pp. 3.

LEIPERT, T. *Die gesetzliche Regelung des Arbeitsnachweises*. Ann. f. Soz. Pol. & Gesetz., IV, 3-4, 1915. Pp. 12.

The interests of labor demand more effective governmental control of employment offices, especially those conducted in the interest of employers' associations.

MAROT, H. *Trade unions and minimum wage boards*. Am. Federationist, Nov., 1915. Pp. 3.

Trade-unionists should not acquiesce in the principle that wages are to be fixed by the cost of living.

PARKER, C. H. *The California casual and his revolt*. Quart. Journ. Econ., Nov., 1915. Pp. 17.

Effective organization of the California casual laborers is unlikely.

POTTHOFF, H. *Die Sicherung des Existenzminimums*. Soz. Praxis, Sept. 30, 1915. Pp. 3.

Argues from war experience the possibility and desirability of furnishing every citizen a minimum subsistence in goods.

Agricultural strikes according to recent official statistics. Mo. Bull. Soc. & Econ. Intell., Nov., 1915. Pp. 8.

The distribution, duration, and results of such strikes in Italy.

Department of Labor conference on employment, held at San Francisco, Cal., August 2 to 6, 1915. Monthly Rev., Oct., 1915. Pp. 9.

Federal employment work of the Department of Labor. Monthly Rev., Oct., 1915. Pp. 3.

Minimum wages for female workers in France. Board of Trade Labour Gaz., Oct., 1915. Pp. 2.

Abstract of the new French law which provided for the fixing of minimum rates for female home workers in the clothing trades.

Rhode Island wage arbitration. Elec. Ry. Journ., Oct. 30, 1915. Pp. 3.

Abstract of the brief presented by the Rhode Island Company.

The Rockefeller plan. Survey, Oct., 16, 1915. Pp. 5.

The full text of the agreement between the Colorado Fuel and Iron Company and its employees.

Scientific management under the X-ray. Ir. Age, Nov. 25, 1915. Pp. 10.

Regarded as prejudicial to organized labor.

Statistics of trade unions in 1914. Bull. Dept. Labor of State of N. Y., No. 74, Sept., 1915. Pp. 149.

Membership of trade unions, by localities and trades, in New York state on September 30, 1914.

Wages during the war. Board of Trade Labour Gaz., Oct., 1915. Pp. 2.

Four and a half million English work people have had their wage rates increased by over £750,000 per week since the outbreak of war.

Prices and Cost of Living

FAIRCHILD, H. P. *The standard of living—up or down?* Am. Econ. Rev., March, 1916. Pp. 19.

HANSEN, A. H. *Wholesale prices for the United States 1801-1840.* Quart. Pub. Am. Stat. Assoc., Dec., 1915.

KING, W. I. *Do high prices mean prosperity?* Annalist, Jan. 17, 1916.

RUDLOFF, L. *Rindvieh- und Schweinepreise im Ausland in den einzelnen Monaten der Jahre 1909 bis 1913.* Jahrb. f. Nat. Oek., III, 50, 4, 1915.

WILLIAMS, T. T. *The rise of prices in India.* Econ. Journ., Dec., 1915.

Money, Credit, and Banking

(Abstracts by Don C. Barrett)

BRENTON, A. and KOELSCH, W. F. H. *Status of bank and trade acceptances under the Federal Reserve act.* Journ. Am. Bankers Assoc., Dec., 1915.

Both writers are bankers who favor development of such acceptances involving domestic commercial transactions.

BURRELL, H. V. *A historical survey of the position occupied by the Bank of England as regards the other banks of this country, the state, and the financial and commercial community generally with especial reference to*

the present position of the bank. Journ. Inst. Bankers, Nov., 1915. Pp. 21.

Essay awarded a prize by the Institute of Bankers.

DEL MAR, A. *The evolution of national money and its climax in the federal reserve system.* Journ. Am. Bankers Assoc., Dec., 1915. Pp. 2.

Monetary issues mark progress of civilization. Interesting statement.

DENBY, C. *Chinese and American exchange.* Bankers Mag., Jan., 1916.

DOUGLAS, A. W. *Does the gold supply control prices?* Annalist, Oct. 18, 25, Nov. 1, 8, 1915. Pp. 4.

Series of four articles. Denies that variation in supply of gold controls price movements.

DREHER, H. J. *Wisconsin's experiment in applying its rural credits law.* Journ. Am. Bankers Assoc., Nov., 1915. Pp. 4.

Experiment a success in developing new land. Bankers coöperate in making loans.

HALL, P. L. *The federal reserve banking act.* The Mid-West Quart., Jan., 1916.

HARRISON, M. W. *Study course in savings banking.* "Savings banking in Europe." Journ. Am. Bankers Assoc., Jan., 1916.

HOFFMANN, W. *Deutsche Banken in der Türkei.* Weltwirts. Archiv, Oct., 1915. Pp. 12.

German banks have exerted the primary influences in building up business relations between Germany and Turkey.

JENNINGS, H. J. *Why not a currency loan?* Nineteenth Cent., Dec., 1915.

Dangerous proposals which might lead to a paper money régime in England.

LANSBURGH, A. *Die grossen Notenbanken im Dienste der kriegführenden Staaten.* V, VI. Oct., Nov., 1915. Pp. 17, 13.

V. Analyzes the monetary situation in Italy since her entrance into the war. VI. Success of Reichsbank in providing war loans to the state and funds for industries of the nation.

LANSBURGH, A. *Zur Frage des Börsen-Moratoriums.* Die Bank, Oct., Nov., 1915. Pp. 12, 15.

In these two articles the author compares methods pursued on the bourses of Berlin and Paris in meeting difficulties arising since war began.

LANDESBERGER, J. *Das Geld- und Kreditwesen im Kriege.* Weltwirts. Archiv, Oct., 1915. Pp. 18.

LÉMONON, E. *L'industrie et le crédit en Italie.* Journ. des Econ., Oct. 15, 1915. Pp. 10.

Merchants and manufacturers complain of lack of support for business. Remedy is that they should and could offer banks good commercial paper and secure extensive credits.

LEVY, R.-G. *French money, banking, and finance during the great war.* Quart. Journ. Econ., Nov., 1915. Pp. 20.

Excellent article. Holds that although gold has disappeared from circulation, note issues of the Bank of France have assumed enormous proportions, foreign exchanges have caused anxiety, the monetary banking and financial conditions of France are sound and warrant the confidence of investors in public funds. The country can bear a debt three times as large as that of 1870.

McNALLY, R. F. *Clearing house organization as applied to country banks.* Journ. Am. Bankers Assoc., Nov., 1915. Pp. 3.

MELLOB, H. *Paper currency and the rise in prices.* Bankers' Mag. (London), Jan., 1916.

MOELLER, H. *Betrachtungen über der Scheckverkehr in England un Deutschland.* Die Bank, Nov., 1915. Pp. 11.

Analysis of check and deposit system in England with view to suggesting improvements in German system of credit payments.

PALGRAVE, R. H. I. *Increase in notes in circulation.* Bankers' Mag. (London), Oct., Dec., 1915. Pp. 6, 6.

Sees illustration of quantity theory in increase of note issues in different countries of Europe and concurrent rise of prices. Specie payment suspended by banks in Germany and France. England redeems her treasury notes. France has prevented depreciation. England's gold reserve against note issues is adequate, but all issues should be made by Bank of England.

PALGRAVE, R. H. I. *The report of the banks of France, Germany, and the Netherlands.* Bankers' Mag. (London), Nov., 1915. Pp. 6.

All these banks show the effect of difficulties caused by war. Large issues of notes, many of smaller denomination than formerly, were made by each bank.

PATTERSON, E. M., editor. *The Federal Reserve Board and its accomplishments.* Ann. Am. Acad., Jan., 1916. Pp. 67.

Series of good articles by: E. M. Patterson, "The organization and work of the board"; W. Jugle, "Credit reformation"; E. E. Agger, "Commercial paper and the board"; G. B. Anderson, "New system of check collection"; J. Clausen, "Foreign trade under the reserve act"; and G. J. Seay, "Completing the reform of banking system."

RAFFALOVICH, A. *L'organisation du crédit en Allemagne pendant le guerre.* L'Econ. Franç., Oct. 16, 1915.

SAUNDERS, R. E. *The Bank of England.* Moody's Mag., Oct., 1915. Pp. 4. Brief historical survey.

SCHOELE, O. *Der Postscheckverkehr und die Banken.* Die Bank, Oct., 1915.

Warning against enlarged bank-note circulation in Germany. Explores opposition of banks to greater use of the safer postal checks.

SEAY, G. J. *National bank reserves.* Bankers Mag., Dec., 1915. Pp. 9.

Favors putting into immediate operation the complete reserve provisions of Federal Reserve act. To carry out provisions during two years would be to run risk of dangerous inflation and then final

opposition to necessary shifting of reserves. Present large cash holdings of member banks would render immediate transfer of reserves easy.

WILLIS, H. P. *The first year of the new banking system*. Pol. Sci. Quart., Dec., 1915. Pp. 27.

Considers the organization of the system and its initial working, standardization of commercial paper and improvement of lending conditions, problem of rate of discount, unimportance of currency function of reserve banks, collecting and clearing checks, income earning power, and the question of banking leadership.

Bank of the Netherlands, 1914-1915. Bankers' Mag. (London), Nov., 1915.

Report by the president of the bank giving details of successful operation from July, 1914, to June, 1915.

Future of the reserve system. Journ. Am. Bankers Assoc., Nov., 1915. Pp. 11.

Several articles. Mr. Warburg insists, for federal reserve banks, on a broad policy of large gold holdings and unimportance of dividends. Chairmen Rich and Bosworth declare a paradoxical situation. Member banks want dividends, yet are reluctant to see reserve banks compete for business. National Association of Credit Men advocates domestic trade acceptances.

The imperial bank of Germany. Bankers' Mag. (London), Oct., 1915. Pp. 2.

Tables showing coin and bullion held and notes issued 1876 to 1914. Influence of war is marked in amount of note circulation.

The national agricultural bank. Mo. Bull. Econ. & Soc. Intell., Oct., 1915. Pp. 6.

Argentina establishes the bank to promote rural industries and co-operative credit societies.

Organization and work of the real estate credit societies (conclusion). Mo. Bull. Econ. & Soc. Intell., Sept., 1915. Pp. 13.

Shows condition of 61 societies and gives details of action of a typical society (Dijon).

The recent gold and currency operations of the federal reserve banks. Econ. Wld., Dec. 11, 1915. Pp. 4.

Defends administrators of reserve system against criticisms of *Commercial and Financial Chronicle*.

Report of the imperial bank of Germany for the year 1914. Bankers' Mag. (London), Oct., 1915. Pp. 32.

Report given *in extenso*.

Rural credits campaigners introduce avalanche of bills in Congress. Journ. Am. Bankers Assoc., Jan., 1916.

The work of the special agricultural credit institutes in 1914. Mo. Bull. Econ. & Soc. Intell., Oct., 1915. Pp. 10.

Italy's method is to grant credits through minor local institutions.

The world's new money. Annalist, Jan. 3, 1916. Pp. 2.

A year of a new era. Annalist, Nov. 15, 1915. P. 1.

Part played by federal reserve system in business revival.

Public Finance

(Abstracts by Charles P. Huse)

BATES, F. G. *Budgetary laws*. Am. Pol. Sci. Rev., Nov., 1915. Pp. 4.

A digest of budgetary laws of 1915 in five states which anticipated the provisions of the proposed New York constitution.

CHANDLER, A. D. *The serial bond's advantage*. Annalist, Oct. 25, 1915. Pp. 2.

Points out the great saving from the use of the serial bond instead of the sinking fund method in the repayment of public debts.

CHASE, H. S. *What is the treasury balance?* Annalist, Dec. 20, 1915. Pp. 2.

Disapproves of recent changes in accounting methods of United States Treasury which permit it to show a "net balance."

COMPTON, W. *Recent tendencies in the reform of forest taxation*. Journ. Pol. Econ., Dec., 1915. Pp. 9.

Presents a scientific basis for reforms in forest taxation.

DONALD, W. J. A. *Canadian financial problems*. Journ. Pol. Econ., Oct., 1915. Pp. 38.

A critical discussion of the financial situation in Canada in 1914, the war budgets, and the probable effects of the war upon Canadian finances.

DOW, W. W. *The high cost of war*. Stone & Webster Pub. Serv. Journ., Oct., 1915. Pp. 7.

A detailed statement of the war loans of the belligerents. Americans must prepare for the financial reaction following peace.

DURAND, C. *Les finances russes: le discours du ministre des finances à la Douma*. L'Econ. Franç., Sept. 18, 1915. Pp. 3.

Discusses the speech of the finance minister to the Douma on August 1, 1915, in which he outlined Russia's methods of financing the war.

EGGENSCHWYLER, W. *Die Bestimmung der Volkseinkommen und die Finanzierung des Krieges*. Jahrb. f. Nat. Oek., III, 50, 5, 1915. Pp. 9.

A theoretical discussion of the effect of war expenditure upon national income.

EINAUDI, L. *The public finances of Italy*. Econ. Journ., Dec., 1915. Pp. 19.

Traces development of Italian finances from 1862 to present time, with special attention to the financing of the war.

FOXWELL, H. S. *British war finance*. Econ. Journ., Dec., 1915. Pp. 18.

A critical survey of British war measures, dealing with banking, finance, and foreign exchange.

GUYOT, Y. *Le budget britannique*. Journ. des Econ., Oct. 15, 1915. Pp. 28.

An account of the British budget of September 21, 1915. The willingness of the British to bear heavy taxes denotes strength.

GUYOT, Y. *Le crédit britannique et la guerre*. Journ. des Econ., Nov., 1915. Pp. 22.

Considers the effect of the war on British credit, both public and private.

JÈZE, G. *L'emprunt de guerre italien à 1/2% net (1er-18 juillet 1915)*. Rev. Sci. Légis. Finan., July-Sept., 1915. Pp. 49.

A critical discussion of the Italian war loan of July, 1915. Mediocre results due probably to low incomes of the mass of the people, lack of knowledge concerning loan, and, possibly, to lack of patriotism among well-to-do.

JÈZE, G. *Les finances de guerre de la France. II. Les pouvoirs financiers conférés au Gouvernement pour conduire la guerre*. Rev. Sci. Légis. Finan., July-Sept., 1915. Pp. 109.

Presents with critical discussion the text of laws giving the French government extraordinary financial powers for carrying on the war. Regrets certain departures from the constitution.

JONES, C. L. *War and public finance in South America*. Journ. Pol. Econ., Oct., 1915. Pp. 16.

Describes the measures taken by the South American republics to meet the shock of the war. Finds a general disposition to maintain their credit.

LAWRENCE, F. W. P. *War economics*. Econ. Journ., Dec., 1915. Pp. 9.

Compares the merits of various methods of meeting war expenditure.

NAVARRA-CHIMÉ, G. *La guerra e l'imposta sulle successioni*. Rif. Soc., Aug-Oct., 1915. Pp. 8.

Immediately after outbreak of the war, France and England abolished inheritance taxes upon the estates of men killed in the war.

MARSH, A. R. *National war debts in the light of economic analysis*. Econ. Wld., Oct. 16, 1915. Pp. 6.

Develops Mill's argument concerning the rapid recovery of countries devastated by war and concludes that "it cannot be argued that they will emerge from the war substantially poorer than they were before it began."

NORMAND, J. *La dette municipale de la Ville de Paris (emprunts et annuités diverses)*. L'Econ. Franç., Oct. 23, 1915. Pp. 3.

Traces the history of the various issues which make up the present debt of the city of Paris.

PAYEN, E. *L'application de la loi réformant l'impôt foncier non bâti*. L'Econ. Franç., Oct. 2, 1915. Pp. 3.

Describes the transformation of the French tax on unimproved land from an apportioned to a rated one and compares by departments the old and the new assessments.

SANDERS, W. *New taxation and the investor*. Finan. Rev. Rev., Dec., 1915. Pp. 11.

Considers, from the investor's point of view, the working of the new rates of the British income tax and the excess profits duty.

STIMSON, H. L. *Former secretary of war explains state's financial muddle*. Greater N. Y., Oct. 25, 1915. Pp. 4.

Points out that adoption of new constitution in New York state would secure a great saving through the use of the serial bond method and the restriction of the terms of bonds to the life of the improvement.

VERINDER, F. *Land, labour and taxation after the war*. Land Values, Dec., 1915. Pp. 6.

A paper read by the general secretary at a meeting of the central council of the English league for the taxation of land values, Oct. 25, 1915.

Administration of the Indian Office. Munic. Research, Sept., 1915. Pp. 118.

Report of an investigation made by the New York Bureau of Municipal Research concerning the organization, methods, finances, and accounts of the United States Indian Office.

The city's finances discussed by Mayor Mitchell. Greater N. Y., Oct. 18, 1915.

Mayor Mitchell foresees increased expenditures for New York City, due to heavy state tax and adoption of a pay-as-you-go policy for non-income-bearing improvements.

The income tax. New Statesman, Oct. 9, 1915. Pp. 2.

Condemns the heavy tax upon small incomes recently proposed in England.

Public budgets. Ann. Am. Acad., Nov., 1915. Pp. 287.

A collection of articles devoted to national, state, and municipal budgets, with a list of references appended.

Les finances de guerre de l'Angleterre. III. *La progression des dépenses de guerre; l'emprunt*. Rev. Sci. Légis. Finan., July-Sept., 1915. Pp. 38.

Traces, largely through the speeches of parliamentary ministers, the progress of England's war finances from May to July, 1915.

Le grand emprunt national. L'Econ. Franç., Nov. 20-Dec. 18, 1915.

Series of articles giving terms of the new French loan and following it weekly through the period of subscription. A yield of 5.73 per cent, tax free, makes the loan a very attractive investment.

La hausse des prix et les projets de réquisition et de taxation. L'Econ. Franç., Nov. 13, 1915. Pp. 2.

Gives table of war prices in France. Official price of wheat kept down through removal of duty.

Insurance and Pensions

(Abstracts by Henry J. Harris)

BREITER, A. *Einiges zur Frauenversicherung*. Zeitschr. f. d. ges. Versicherungswis., Nov., 1915. Pp. 19.

FISHER, W. C. *The scope of workmen's compensation in the United States*. Quart. Journ. Econ., Nov., 1915. Pp. 41.

Present compensation legislation in the United States, while it represents progress, is far from ideal. Through variety of restrictions, probably only a fourth of those sustaining industrial injuries receive compensation.

HANAUER, W. *Der Krieg und die deutsche Arbeiterversicherung.* Jahrb. f. Nat. Oek., III, 50, 4, 1915. Pp. 26.

The various branches of the German social insurance system, although organized for operation under peace conditions, have not only withstood the strain of war conditions, but have also expanded in several important respects.

HOFFMAN, L. S. *Some practical workmen's compensation questions.* Elec. Ry. Journ., Dec. 18, 1915. Pp. 3.

Analysis of the Pennsylvania act, with explanation of experience under similar provisions in the New Jersey act.

KING, G. *The new national life tables.* Journ. Inst. Actuaries, Oct., 1915. Pp. 57.

Explanation of methods used in preparing the life tables published in the seventy-fifth annual report of the registrar-general of births, deaths and marriages in England and Wales.

RIEGL, R. *Causes of legislation against fire underwriters' associations.* II. Econ. Wld., Dec. 11, 1915. Pp. 3.

Legislation hostile to underwriters' associations is in no small part due to failure to eliminate discriminations between classes of risks, between kinds of policies, between localities and between particular risks.

RIEGL, R. *The legal status of underwriters' associations.* III. Econ. Wld., Jan. 15, 1916. Pp. 4.

Fire insurance rates are the problem of greatest importance in present-day insurance. Underwriters' associations have certain definite and useful functions and any evils which arise from the existence of these associations can best be cured by regulation, not prohibition, of them.

RIEGL, R. *Protection of a mortgagee's interest in real property by insurance.* Journ. Pol. Econ., Dec., 1915. Pp. 9.

Court rulings on the various types of contracts.

ROHRBECK, W. *Der Krieg und die deutsche Hagelversicherung.* Zeitschr. f. d. ges. Versicherungswis., Nov., 1915. Pp. 7.

The years 1914 and 1915 were successfully concluded by the hail insurance companies, which also rendered special service to the farmers in Belgium and Poland.

ROTH, L. *Pension funds for public service employees.* Survey, Oct. 30, 1915.

The New York Public Service Commission (Second District) allowed a public utility company to contribute to an employees' pension fund as one of its reasonable expenses. Writer concludes that this action places the fund under control of the commission and holds that employees' rights will be better protected by such control.

SCATTERGOOD, C. E. *The synthesis of rates for workmen's compensation.* Econ. Wld., Jan. 8, 1916. Pp. 6.

Summary statement of ten essential cost factors which must be used by rate calculators.

WERNEBURG. *Die rechtliche Natur des Haftpflicht-Versicherungsanspruchs.* Zeitschr. f. d. ges. Versicherungswis., Nov., 1915. Pp. 7.

WOODBURY, R. M. *Social insurance, old age pensions and poor relief.* Quart. Journ. Econ., Nov., 1915. Pp. 19.

About one eighth of the amount paid out by the social insurance system of Germany (to persons over 70) is a saving to poor relief.

The Danish peasant and social insurance. Mo. Bull. Econ. & Soc. Intell., Nov., 1915. Pp. 8.

Danish legislation provides: (1) old age pensions (21 per cent of the men and 38 per cent of the women over 60 are receiving pensions); (2) sickness insurance (710,861 members of mutual societies); (3) accident insurance; (4) unemployment insurance, on the Ghent system (120,289 persons insured); and (5) pensions to widows by the law of April 1, 1914.

Recent reports relating to workmen's compensation and industrial accidents. Mo. Rev. U. S. Bureau Labor Statistics, Feb., 1916. Pp. 26.

Digest of reports from Illinois, Iowa, Massachusetts, Montana, Washington, and West Virginia.

Population and Migration

(Abstracts by William B. Bailey)

CARVER, T. N. *Redistribution of population after the war.* Annalist, Jan. 3, 1916. Pp. 2.

The author thinks we will get a poorer class of immigrants after the war and that they will crowd into our cities rather than spread over our farms.

FORSYTH, C. H. *Vital and monetary losses in the United States due to preventable deaths.* Quart. Pubs. Am. Stat. Assoc., Dec., 1915. Pp. 35.

Estimates that between the ages of 20 and 69 the present value of the loss due to preventable deaths in this country is about $4\frac{1}{2}$ billions of dollars, and that the annual loss is about 250 millions of dollars.

HIBBS, H. H., JR. *The influence of economic and industrial conditions on infant mortality.* Quart. Journ. Econ., Nov., 1915. Pp. 24.

Concludes that the principal cause of high death-rate among children is insufficient family income.

HIBBS, H. H., JR. *The present position of infant mortality: its recent decline in the United States.* Quart. Pubs. Am. Stat. Assoc., Dec., 1915. Pp. 14.

Since 1881 the rate of infant mortality has declined in practically all European countries and in Massachusetts and Boston in this country; and during the past 12 or 15 years this decrease has been very marked.

HOWE, F. C. *Immigration after the war.* Scribner, Nov., 1915.

KELLOR, F. A. *Lo, the poor immigrant!* Atlantic, Jan., 1916.

KLAUS, H. *Judenfrage und Deutschtum.* Natur & Gesellschaft, Nov., 1915.

The probable effect upon German unity of the inclusion of a large number of Jews with distinct racial characteristics.

LAUCK, W. J. *A new aspect of an old problem.* Annalist, Sept. 27, 1915.

A study of the number of wage-earners in the United States who come from the countries now at war in Europe.

MAITRE, J. *Les statistiques de natalité.* Réf. Soc., Oct., 1915. Pp. 10.

The growth of religion is selected as the most likely means by which the birth-rate in France can be increased.

PRINGSHEIM, O. *Grundbesitzverteilung und innere Kolonisation.* Ann. f. Soz. Pol., IV, 3-4, 1915. Pp. 10.

The division of the land into smaller farms seems likely to reduce emigration from Germany.

SHRIVER, W. P. *Immigrants on the Pacific coast.* Immigrants in Am. Rev., Sept., 1915. Pp. 4.

A short study of the economic and social condition of the immigrants on the Pacific coast. Most of the information was obtained from a series of conferences.

WILLCOX, W. F. *Some population statistics of the Pacific coast.* Quart. Pubs. Am. Stat. Assoc., Dec., 1915. Pp. 16.

The conclusion is reached that most of the remarkable increase of population in these states since 1900 has been due to immigration from other states and only to a small extent from surplus of births over deaths.

Pauperism and Charities

(Abstracts by Frank D. Watson)

BOSANQUET, B. *Politics and charity.* Charity Organ. Rev., Nov., 1915. Pp. 15.

An attempt to indicate the scope of action of government and volunteer agencies respectively in the field of social service. The author believes that because of the need of a high degree of expertness some forms of social service still demand a greater remoteness than others from directly political control.

PHELPS, L. R. *Some lessons of war relief.* Charity Organ. Rev., Oct., 1915.

"Need of strength and more effective coöperation in social service"; and far more training for social workers. Optimistic as to the future.

Improving social conditions in New York City. Charity Organ. Bull. No. 105, Jan., 1916. Pp. 58.

Part II of the annual report of the Charity Organization Society of New York City (Part I, covering the Department of General Work with families was published as an earlier bulletin, No. 100, Dec. 1, 1915). It is a record of work done by the Tenement House Committee, the Committee on Criminal Courts, and the Committee on the Prevention of Tuberculosis.

Social service and the federal government. Soc. Serv. Rev., Nov., 1915. Pp. 2.

A brief and appreciative account of the work of the Public Health Service. The second of a series of articles describing the human betterment work of the various governmental departments.

CORRESPONDENCE

A DEFENSE OF THE STANDARD ACCIDENT TABLE. In undertaking the defense of the *Standard Accident Table*, reviewed by Professor Fisher in the December number of this REVIEW,¹ I do not take exception to that part of the criticism which points out certain regrettable errors of hasty preparation. *The Standard Accident Table* was prepared under very great pressure to meet a situation which had to be met at once, and was published at the time when the rapid passage of compensation laws in one state after another required an enormous amount of rate-making work by the Actuarial Committee of the central organization of casualty insurance companies, of which I have been chairman since its appointment.

But in addition to these minor matters, Professor Fisher charges "unwarranted interpretations, neglect and denial of relevant data, and questionable statistical or social principles." If these charges were true, the scientific standing of the table would certainly be seriously jeopardized. It may be answered that the table at present represents one of the basic elements of which compensation insurance rates throughout the country are constructed. At a joint conference of various casualty insurance organizations and four state insurance departments, recently held in the city of New York for the purpose of elaborating a uniform system of compensation insurance rates, *The Standard Accident Table* was approved as the best now available basis of compensating state law differentials (i.e., quantities measuring the comparative cost of the benefit scales of different compensation acts). At the same time, however, the Casualty Actuarial and Statistical Society of America was requested to begin the preparation of a corrected table upon the basis of American experience. So much to point out the practical and theoretical importance of the table.

In particular, Professor Fisher says:

Dr. Rubinow's fundamental assumption that the distribution of injuries will be approximately the same in all lands and his repeated comment that divergencies in reports are due to differences in judgment rather than in physical fact are not consistent with the intrinsic probabilities of the case and scarcely can be reconciled with facts familiar on every side.

If this criticism be valid, the entire purpose of compiling *The Standard Accident Table* vanishes. My fundamental assumption was first stated nearly four years ago, in the following terms:²

¹ AMERICAN ECONOMIC REVIEW, vol. V, no. 4 (Dec., 1915), p. 903.

² "Arriving at the cost of workmen's compensation in the United States," in *The Market World and Chronicle* (now *The Economic World*), June 22, 1912.

As regards the problem of the nature and effects of injuries . . . there can be no great differences between one country and another. An examination of the statistical material of various countries shows that there is practically no variation from country to country. It appears that whatever its nationality, the human machine is a human machine, and that its average resistance to injury and its average speed of recovery from injury vary very little.

Later, my theory was stated more specifically:³

Given a sufficiently variegated industrial activity, the distribution of accidents according to their physical results will be fairly uniform anywhere.

Some of the best students of compensation problems, such as Professor A. W. Whitney,⁴ now manager of the Workmen's Compensation Service Bureau, and A. H. Mowbray,⁵ actuary of the Massachusetts Employees Insurance Association, have not only accepted the theory, but substantiated it by numerous statistical tests.

The main purpose of the table, as already stated, is to measure the comparative cost of different compensation schedules. The differences are many and complicated. Were all accidents of the same character, the question would be a simple one, but act A may treat temporary disability more liberally than act B, dismemberments less liberally, and fatal accidents in the same way. There are perhaps 20 or 30 different kinds of dismemberments, and for every one of them a different scale of compensation may exist. How shall we say that, in the whole, act A is so many per cent costlier than act B? Evidently we must assume that there is a certain relation between the frequency of accidents of different degree of gravity, and that out of 100 accidents (or 100,000) there will be so many fatal cases, so many losses of arms, so many cases lasting two weeks, etc. In other words, a standard accident table is necessary. But, of course, if there is no one distribution of accidents which would hold true of both states at least approximately, then such a comparison becomes quite impossible.

As explained in my book, the greatest difficulty is the absence of a universally accepted definition of an accident. In Massachusetts, for instance, all accidents are reported even if the time lost be five minutes, or none. In Russia, those under four days are not reported, etc. "Evi-

³"Scientific methods of computing compensation rates," in the *Proceedings of the Casualty Actuarial and Statistical Society of America*, vol. 1, no. 1 (1915), p. 18.

⁴See "Memorandum concerning a proposed scale of compensation benefits to be paid workmen injured through industrial accidents, now under consideration by the Industrial Accident Board of California," 1912.

⁵See typewritten memorandum entitled "A suggested basis for the determination of comparative cost of different schedules, and some comparisons thereof," 1912.

dently since the number of such minor accidents is very large, the percentage of all classes of serious accidents whether resulting in death or permanent disability, etc., will depend very much upon how many of these small accidents are included" (pp. 13-14).

With these considerations in mind, I will present only one exhibit in support of my fundamental assumption. The following table shows the percentage distribution of temporary disability cases:

(a) Among employees of the United States government, 1908-1910, when only accidents over one day's duration (the Standard American definition of accident) are included.

(b) In Massachusetts, 1912-1913, with all notices included.

(c) In Russia, 1904-1906, accidents of four days or included.

These examples are selected almost at random, because they offer distribution by comparable periods.

Duration	U. S.	Mass.	Russia
Under 2 weeks	55.2	76.5	51.7
2 to 4 "	21.2	11.8	22.0
4 to 8 "	14.0	7.4	15.0
8 to 13 "	4.5	2.6	6.6
Over 13 "	5.1	1.7	4.7
	100.0	100.0	100.0

A comparison of these three series of percentages would seem to support Professor Fisher's contention that my assumption is untenable. But it is possible to eliminate the differences in the bases of their data by eliminating for Massachusetts accidents leading to disability of not over one day, and by increasing in the data for Russia the number of cases under two weeks by a certain number to adjust for failure to include accidents of over one day but not over four days' duration. The details of these adjustments are given in the book. After these adjustments are made, the comparison appears as follows:

Duration	U. S.	Mass.	Russia
Under 2 weeks	55.2	60.1	57.6
2 to 4 "	21.2	20.0	19.3
4 to 8 "	14.0	12.5	13.2
8 to 13 "	4.5	4.5	5.8
Over 13 "	5.1	2.9	4.1
	100.0	100.0	100.0

I believe every unprejudiced statistician will agree that we are dealing here with a definite standard distribution, independent of local conditions. Of the slight differences which appear, most can be readily explained by differences in the application of the compensation act. Thus in the federal statistics, the percentage of accidents under two weeks is lower, and those of two to four weeks higher. There are at least two definite reasons for this: The reporting of minor accidents uncompensated under the act was admittedly deficient in 1908-1911; and the provision under which injuries under 15 days receive no compensation at all, while those 15 days and over receive full compensation from the day of injury, tends to throw a certain number of accidents from the first into the second group.

Professor Fisher says:

The basis of compensation awards and of compensation insurance is not the naked or objective physical fact, but the physical fact as judged by those who administer the laws.

Undoubtedly true. I have emphasized in the formula quoted above the "physical results" of the accidents. Still the judgment, no matter how capricious, must bear some relation to the physical facts. It must be remembered that every time a new compensation law goes into effect, the Actuarial Committee is called upon to furnish a law differential for the new untried law. Even if the facts are assumed to correspond to the *Standard Accident Table*, and the word of law is known, the method of application by the commission or courts can only be a matter of guesswork. If we refuse to accept the above hypothesis, which for a time was nicknamed the "Rubinow law," all basis for scientific rate making disappears.

Judgment, in addition to physical fact, becomes very important when dealing with partial permanent disabilities. Who shall tell what degree of disability a stiff elbow, or a shortened leg, or an unhealed fracture represents? This condition was clearly recognized in the preparation of the *Standard Accident Table*. Certain assumptions had to be made. Some of them undoubtedly will need revision. Hence the temporary character of the first edition. It is Professor Fisher's privilege to disagree at this time with some of these assumptions, but that does not establish "neglect and denial of relevant data" by the author. Again let us examine the definite specifications.

In this country, happily, there are probably not so many as 110 permanent total disabilities to the 100,000 accidents. In Massachusetts in 1912-1913 there were but 7 from 52,267 injuries and in Washington there were but 28 in 42,231 cases disposed of up to September, 1914.

Accepting these Massachusetts and Washington data at their face value, Professor Fisher is justified in making the terse criticism: "It is not true that there are no American data for permanent total disabilities or degrees of partial disabilities." If I had qualified my original statement by the words "reliable," "dependable," or "usable," I would have expressed my thought much more clearly. For I knew of the Massachusetts and Washington data and was forced to reject them absolutely. Data for Washington were not available up to September 30, 1914, at the time of the preparation of the *Standard Accident Table* (July-August, 1914). An earlier report showed that at the end of the first year there were only 2 cases out of 8893 disposed of, or 23 per 100,000; and at the end of the second year, 15 out of 26,248, or 55 out of 100,000. The third year, therefore, developed 13 more cases out of 15,983 cases disposed of, or 81 out of 100,000; while for the three years together the ratio is 66 out of 100,000. The number estimated in the *Standard Accident Table*, 110 per 100,000, does not, therefore, appear so excessively high. In any case, the present time is too early to criticize this estimate.

The situation in Massachusetts is identical. If for the first year, 7 permanent total disabilities out of 52,267 (or only 13 per 100,000) were reported, the second annual report for 1913-1914, just issued, and not available to Professor Fisher at the time of writing his review, shows 20 total permanent cases out of 52,433, or 38 per 100,000. Surely this rapidly rising scale offers some food for reflection. Can the data for the first year be recognized as "valuable statistics"?

To eliminate the errors arising from hasty observations of premature and unreliable data was the very purpose of the *Standard Accident Table*, for a premium based upon an assumption of 13 permanent total disabilities will not pay for the 110 which may be expected to arise, if the *Standard Accident Table* is at all correct. The very concept of a permanent total disability emphasizes the difficulty of recognizing the condition until a considerable time has elapsed.

Most, or in fact nearly all, American compensation acts specify certain gruesome and very rare injuries as constituting total permanent disability by presumption. Among such injuries are: total blindness, loss of both arms or hands, loss of both legs or feet, sometimes loss of any two extremities, total paralysis, or incurable insanity. But these cases of total physical incapacity will not constitute the majority of total economic disability. These injuries specified above can be readily recognized early. In other cases, considerable time must elapse before the permanent character becomes evident.

In fact, since in Massachusetts total disability is compensated for 500 weeks only, after which all payments stop, what statistical basis is there for determining whether the case will last long after the 500 weeks? Furthermore, what necessity is there of such decision as to the permanency, since it makes no difference in award?

Nevertheless, it is significant to observe that in Massachusetts during the first year out of 7 cases of permanent total disability 3 were due to specific injuries as described above, while in the second year out of 20 cases there were only 5 of this character. In other words, during the first year only 4 cases were recognized as belonging to the group of permanent total disability, even though the injuries were not so gruesome, and in the second year 15 cases. It is, of course, certain that whether the condition is recognized in the second year or not payment of the compensation will go on, and it is important that it be provided for in the insurance rate.

The third important point which Professor Fisher raises pertains to the distribution of partial permanent disability cases by degree of disability. As an examination of my book will show, this group of cases proved to be the most difficult to handle, and a substantial part of the study was devoted to it (pp. 23-32). The reason is obvious. In the discovery of the existing condition, and especially in its appraisalment, the element of human judgment enters very largely. It is quite likely that for some time the tendency in this country will be to judge these cases too lightly. In fact, the milder cases will not be recognized at all. For this reason the number of cases to be expected in this country was estimated as low as appeared reasonably safe. But this elimination of the lighter cases should of itself increase the average degree of disability per case. For this reason the Danish figures were discounted—which Professor Fisher finds objectionable.

Whether the distributions finally compiled (with about 53 per cent under 20 per cent disability) will still prove too high, only satisfactory statistics for a number of years will demonstrate. But the reference which Professor Fisher makes to the experience of the state of Washington is altogether irrelevant and based upon insufficient analysis of the statistics of that state.

The maximum award for any permanent partial disability is fixed by the law at \$1,500 for the loss of a major arm at or above the elbow. This is arbitrarily estimated to be a sixty per cent disability, each one per cent of permanently reduced efficiency being awarded \$25. All other permanent partial disabilities are awarded in proportion to the estimated disability as compared to the loss of the major arm, each injury being awarded \$25 for each one per cent disability as estimated in the schedule of permanent partial disability.*

* *Second Annual Report of the Industrial Insurance Department of the State of Washington*, p. 96.

I submit that such a crude method does not offer any basis for "statistics" of permanent partial disability that might have any general application; for a mass of crude guesses arranged in tabular form does not necessarily constitute statistics. It is enough to point out that under the Washington method there is not a single case of permanent partial disability over 60 per cent.

Of the minor criticisms made by Professor Fisher, some are justified. Others refer to the somewhat careless use of such words as "a few states," where the statement applies to half of the states, or "a great many" when only 9 or 10 states are included. There are two or three of these criticisms, however, which are evidently due to some misunderstanding of my text by Professor Fisher, and perhaps in justice to the *Standard Accident Table* (if not to myself) these should be corrected.

"The 3,005 married employees injured in Washington in 1912 were not all killed: only 279 fatal injuries were reported in that year." The error of using the word "widows," on page 47, when "wives" were meant, should not have closed Professor Fisher's eyes to the fact that on page 45 when quoting the Washington table, the following language was used, clearly indicating that the character of the data was perfectly understood: "Distribution of all persons injured whether fatally or not, according to class and number of dependents."

Professor Fisher writes: "Pensions for dependent children continued until their ages of self support might also have been left out of the standard table, for these are no more common than allowances for disfigurement." That may be true, but the difference in the respective importance of the two provisions justifies different treatment. I had the statement of the Wisconsin Industrial Commission that for a year they had only two cases of disfigurement at a cost of a few hundred dollars; while the pensions for children up to a certain age represent a very important part of the cost of compensation in the largest states, as in New York and Pennsylvania.

It is true that the *Standard Accident Table* was compiled in a hurry and under pressure, and that it, therefore, lacks the finish the importance of the work would justify. In subsequent editions all necessary changes will be carefully considered and such painstaking examination as Professor Fisher has given it is of the very greatest value.

Notwithstanding its defects, it has succeeded in accomplishing what for a time appeared impossible—that stock casualty companies, mutual insurance companies, state funds, insurance departments, and industrial commissions find no difficulty in agreeing upon rates, and that the exper-

ience of one or a few states may be utilized for the purpose of constructing rates for all other states, each with a different law. Because of this method, many American states, in which compensation laws have gone into effect since 1914 or will go into effect in the future, have had and will have at least something approaching scientific rate making from the very first day of compensation, something which, perhaps, not a single European country could boast of.

I. M. RUBINOW.

NOTES

MEMBERSHIP IN THE AMERICAN ECONOMIC ASSOCIATION. The following members have been elected since November, 1915:

- Baker, Oliver E., 3614 Newark St., N. W., Washington, D. C.
 Baldwin, George B., P. O. Box 15, Appleton, Wis.
 Bell, James W., 467 Broadway, Cambridge, Mass.
 Bergh, Herman R., 1908 Hillcrest Road, Hollywood, Los Angeles, Calif.
 Bonbright, James C., 606 West 122d Street, New York City
 Bradley, Miss Harriet, Governor's Island, N. Y.
 Brown, Herbert D., 326 Winder Bldg., Washington, D. C.
 Burnside, Chas. V., 1418 Newton St., N. E., Washington, D. C.
 Cameron, M. K., 27 Ware St., Cambridge, Mass.
 Carroll, D. D., Livingston Hall, Columbia Univ., New York City
 Converse, Paul D., University of Pittsburgh, Pittsburgh, Pa.
 Cumberland, Wm. W., 24 Graduate College, Princeton, N. J.
 de Bray, A. J., Director Ecole des Hautes Etudes Commerciales, Montreal
 Dewey, Francis H., Jr., 311 Main St., Worcester, Mass.
 Duncan, Carson S., 951 East 53d St., Chicago, Ill.
 Dunham, Arthur L., 38 Hampden Hall, Cambridge, Mass.
 Effinger, Robert C., 35 Claremont Ave., New York City
 Estabrook, Leon M., 1026 17th St., N. W., Washington, D. C.
 Estey, James A., 127 Waldron St., West Lafayette, Ind.
 Fraser, George C., 20 Exchange Place, New York City
 Fuller, Bert C., 380 Lewis Ave., Brooklyn, N. Y.
 Furniss, Edgar S., 916 Yale Station, New Haven, Conn.
 Garber, Edwin C., 3911 Walnut Street, Philadelphia, Pa.
 Hamilton, Walton H., Amherst, Mass.
 Hanks, Miss Ethel E., Children's Bureau, Washington, D. C.
 Hayes, Carlton, H., Columbia University, New York City
 Hunter, M. H., 118 Triphammer Road, Ithaca, N. Y.
 Husband, W. W., 3456 Macomb St., Washington, D. C.
 Hwang, Tzon Fah, 313 Livingston Hall, Columbia University, New York City
 Hyde, J. W., Springfield, Mass.
 Isaacs, I. Sidney, St. John, N. B.
 Jergens, Andrew, Jr., The Andrew Jergens Co., Cincinnati, Ohio
 Kaiser, Clarence H., 3 East 45th St., New York City.
 Kesler, Harold A., Spitzer Bldg., Toledo, Ohio
 Kidd, Howard C., University of Pittsburgh, Pittsburgh, Pa.
 Kochenderfer, C. C., Ithaca, N. Y.
 Larrabee, Miss Hilda L., Tower Court, Wellesley, Mass.
 Leeds, Rudolph G., Richmond, Ind.
 Leshner, Robert A., 2940 Broadway, New York City
 Lester, Hugh, First National Bank Bldg., Birmingham, Ala.
 Lloyd, John E., 29th St. and Ridge Ave., Philadelphia, Pa.
 Loomis, R. H., 102 Lake View Ave., Cambridge, Mass.
 McCarty, Harry C., Federal Trade Commission, Washington, D. C.
 McClung, R. L., 118 Triphammer Road, Ithaca, N. Y.
 McFall, Robert J., University of Minnesota, Minneapolis, Minn.

- MacIver, R. M., University of Toronto, Toronto, Ont., Canada
McLaughlin, John C., 14th and C Sts., N. W., Washington, D. C.
McMillen, G. B., 606 E. Springfield Ave., Champaign, Ill.
Madero, Ernesto, 115 Broadway, New York City
Mantero, Carlos B., 610 West 116th St., New York City
Merritt, Miss Ella A., 1437 Park Road, Washington, D. C.
Miller, Miss Edith M., State Industrial Commission, Columbus, Ohio
Monroe, Arthur E., 27 Conant Hall, Cambridge, Mass.
Montgomery, Robert H., 525 West End Ave., New York City
Newcomer, Miss Mabel, 1230 Amsterdam Ave., New York City.
Nickelsburg, M. S., 559 Mission St., San Francisco, Calif.
Notz, William F., Federal Trade Commission, Washington, D. C.
O'Grady, Rev. John, Catholic University of America, Washington, D. C.
Perlman, Selig, 828 Mound St., Madison, Wis.
Prentiss, Elliot C., El Paso, Texas
Reighard, John J., Iowa State College, Ames, Iowa
Ried, Miss H. F. H., 100 Broad St., New York City
Rife, Raleigh S., 23 Kensington St., New Haven, Conn.
Riley, Elmer A., Ohio Wesleyan University, Delaware, Ohio
Robertson, Thomas M., Federal Trade Commissioner, Washington, D. C.
Robinson, L. R., 79 Carnegie Ave., East Orange, N. J.
Rogers, J. H., Yale Station, New Haven, Conn.
Sack, Isidor, 1029 College Ave., New York City
Sells, Miss Dorothy, 1769 Columbia Road, Washington, D. C.
Shelton, Henry W., 35 College St., Hanover, N. H.
Shoemaker, James H., Cedar Falls, Iowa
Stein, Herman M., 2147 Honeywell Ave., Bronx, New York City
Stone, W. J., 838 Rock Glen Ave., Glendale Delivery, Eagle Rock, Colo.
Straus, Percy S., c/o R. H. Macy & Co., Herald Square, New York City
Sweeney, Fred W., 641 Lexington Place, N. E., Washington, D. C.
Templeton, W. L., The Quaker Oats Co., 1600 Railway Exchange, Chicago, Ill.
Thomson, Edward H., 1417 Belmont St., Washington, D. C.
Tolles, E. Leroy, 149 Broadway, New York City
Trent, Ray, 411 S. Fess Ave., Bloomington, Ind.
Tuttle, Pierson M., Rockaway, N. J.
Wagel, Srinivas R., Hotel Plaza, New York City
Wagner, Napoleon, 1101 Emerson St., Denver, Colorado
Wallace, Charles F., 1504 Commerce St., Dallas, Texas
Ward, William C., 15 Wall St., New York City
Ward, W. E., 2020 Cornell Road, Cleveland, Ohio
Waterbury, C. L., 19 East 24th St., New York City
Watkins, Myron W., 306 Bryant Ave., Ithaca, N. Y.
Wermuth, William C., Jr., 4030 Sheridan Road, Chicago, Ill.
Wessman, A. C., 531 West 37th St., New York City
Wheeler, Joseph L., Reuben McMillan Free Library, Youngstown, Ohio
Whitmore, Edgar, Manhattan Elec. Supply Co., 17 Park Place, New York
Wiest, Edward, 62 Buell St., Burlington, Vt.
Willard, N. W., 1015 Railway Exchange, Chicago, Ill.
Working, Holbrook, 506 Dryden Road, Ithaca, N. Y.
Wright, General M., 606 S. Hope St., Los Angeles, Calif.

The issue of the *Survey* for January 22, 1916, contains accounts of the annual meetings of the American Economic Association (A. A. Young), American Sociological Society (M. B. Cothren), American Political Science Association (C. L. King), American Association for Labor Legislation (J. A. Fitch), American Civic Association (R. B. Watrous), Pan-American Scientific Congress (E. T. Devine), and American Association of University Professors (D. Tucker).

Stimulated by an invitation from the department of economics of the University of Idaho, a state tax association was organized at Boise in the latter part of December, 1915. Although no formal vote was taken, it was generally agreed that it would be a mistake to abolish the state tax commission but that it should be re-created in some form; that the state board of equalization should be abolished; that a new method of classifying and presenting receipts and expenditures should be devised; and that the accounting system of the state should be thoroughly revised.

At the recent conference of the National Commission on Church and Country Life, at Columbus, Ohio, 22 representatives of colleges and universities met to consider the scope and limitations of the service which colleges can render in increasing church efficiency. President Butterfield, of the Massachusetts Agricultural College, was requested to secure a complete list of teachers and extension workers interested in rural organization and to plan for a closer affiliation of those actively engaged in this form of service.

At the National Conference on Marketing and Farm Credits, held in Chicago, November 29-December 2, 1915, 33 representatives of colleges and universities held a session to consider organization for the discussion of their particular problems at the next meeting of the conference. Members of the program committee are Professor John Lee Coulter, of the University of West Virginia, chairman; Professor B. H. Hibbard, of the University of Wisconsin; Professor McPherson, of the Oregon Agricultural College; and Professor Paul L. Vogt, of Ohio State University.

At the seventh session of the Graduate School of Agriculture, to be held at the Massachusetts Agricultural College, Amherst, July 3-28, 1916, more than usual emphasis is to be laid upon the subjects of agricultural economics and rural sociology.

Columbia University in coöperation with the Life Underwriters' Association of New York is giving a course in general insurance which will run from January to the latter part of May.

The courses in commerce and business administration at the University of Illinois, established in 1902 with David Kinley as director, have been organized into a college of Commerce and Business Administration. Dr. N. A. Weston, assistant professor of economics, has been appointed acting dean. The three departments of the new college—economics, finance, and statistics; transportation; and business organization and operation—are in the respective charge of Professors Kinley, Dewsnup, and Young.

A school of business at Columbia University will open in September, 1916.

William H. Allen, formerly director of the Bureau of Municipal Research of New York City, has established the Institute for Public Service (51 Chambers Street, New York City).

A survey of the natural resources of the state of New York has been undertaken by a faculty committee in the College of Agriculture of Cornell University, headed by Professor E. O. Flippin.

During the past few months Professor Henry C. Metcalf, of Tufts College, has been giving considerable attention to methods of selecting, promoting, and discharging employees in large industrial plants for the purpose of formulating underlying principles affecting vocational guidance in industry. He has made investigations of plants in Virginia, Massachusetts, and Ohio, and has delivered a number of lectures on "The human interpretation of industry." Professor Metcalf's work will be embodied in a *Vocational Guidance Report* for the June Convention of the National Association of Corporation Schools to be held in Pittsburgh.

Dr. John F. Crowell has been appointed executive officer of the New York Chamber of Commerce. Hitherto the activities of the chamber have been conducted by the secretary, a position formerly filled by Sereno S. Pratt and to which the former assistant secretary, Charles W. Gwynne, has been appointed. The creation of the position of executive officer divides the work between the secretary and this new office. An important part of Dr. Crowell's work will be the directing of research, including the planning of inquiries and coöperation with the various special and standing committees, of which there are fifteen. Among the reports on special inquiries recently published is one on the capacity of shipyards in the United States.

Announcement has been made that prizes offered by Hart Schaffner & Marx for 1915 have been awarded as follows: In Class A, first

prize was granted to Yetta Scheftel for a paper entitled "The taxation of land value: a study of certain discriminatory taxes on land"; second prize to Homer B. Vanderblue for a paper entitled "Railroad valuation"; and honorable mention to Edwin G. Nourse for a paper entitled "The Chicago produce market." In Class B, first prize was granted to Nathan Fine for a paper on "The business agent of the building trades unions of Chicago"; and second prize to Robert L. Wolf for a paper on "Some aspects of the theory of value."

The Board of Regents of the American Institute of Banking have selected the following subjects for post-graduate theses: (1) "The Second United States Bank and its lessons for the operation of the federal reserve system"; (2) "Security prices—interest and discount rates in the years immediately following the Napoleonic and Civil wars"; (3) "The London money market—its rise and its future." The length must not exceed 10,000 words.

The *Immigrants in America Review* announces a prize competition and public exhibition of plans, sketches, grouping, and arrangement for the housing of immigrants in America. The housing plans are divided into three groups: (a) single family house; (b) combined family and lodging house; (c) boarding house or community dwelling. The first prize is \$1000; the second \$500; and the third and fourth \$100 each. There are also prizes for the best plans for a railroad construction gang boarding car. The contest closes May 1, 1916.

The Department of Research of the Women's Educational and Industrial Union (264 Boylston St., Boston) announces three paid fellowships in social-economic research. Applications must be filed before May 1, 1916.

On January 7, twenty-nine members of the faculty of the University of Missouri, belonging to the departments of history, sociology, anthropology, philosophy, psychology, education, economics, political science, law, etc., met and organized a new professional fraternity, Alpha Zeta Pi (*Anthropos Zoon Politikon*), for the promotion of the social sciences. While the present organization is a purely local one, the organizers have had in mind the possibility of similar societies in various institutions of the country getting together and forming a national organization with the same purpose. Alpha Zeta Pi will attempt to do for the social sciences what Sigma Xi is doing for the natural sciences. Students who have distinguished themselves in the university by giving special promise of future achievement in the social sciences, will be stimulated by being elected student members of the

fraternity, and may later be elected permanent members. Both student members and permanent members will have equal rights in the fraternity. The officers for the present academic year are: president, Professor Max F. Meyer of the department of psychology; vice-president, professor C. A. Ellwood of the department of sociology; secretary-treasurer, Professor J. E. Wrench of the department of history. Other institutions desiring to organize chapters are invited to correspond with Professor Wrench.

THE ASSOCIATION OF COLLEGIATE TEACHERS OF BUSINESS LAW. Round-table conferences on the teaching of business law in university schools and departments of commerce, held under the auspices of the Association of American Law Schools, in Chicago, December 27-29, 1915, have led to the organization of the Association of Collegiate Teachers of Business Law. The officers are: president, L. F. Schaub (Harvard); secretary-treasurer, H. E. Oliphant (Chicago); executive committee, the administrative officers and L. E. Young (Illinois), A. W. Bays (Northwestern), S. W. Gilman (Wisconsin), and Nathan Isaacs (Cincinnati). Its object is to improve the standards of business law courses throughout the country.

The first task undertaken by the executive committee is to make a survey of courses now offered in business law. A survey made 25 years ago by the United States Bureau of Education and the American Bar Association revealed 240 colleges in which law courses were offered to non-professional students, most of them in business law. The number has probably increased since then, if in the absence of any later survey we may judge by (1) the tendency of the day to stress "practical" courses, (2) the generally admitted increase in the number of undergraduates preparing for business careers, and (3) the marked improvements in textbooks on the subject since 1900.

In the absence of the information that the survey alone can furnish, the discussions were limited at the conference to (1) the aim, (2) the scope, and (3) the methods of business law. On the last of these subjects there was the nearest approach to unanimity: all of the schools represented with the exception of St. Xavier's favor the use of cases. Judge Geoghehan of that school said that in his subject, sales, the presence of a code made the usefulness of cases questionable. Others thought the concrete cases on sales the most useful in our books for business students in spite of the fact that the code had changed the law of each state in a few particulars. During the discussion of this subject, Professor Floyd R. Mechem, the well-known authority on sales, was present.

As to the scope of the courses, opinions ranged from the skepticism of several visiting law school professors, notably Dean Vance and Mr. C. A. Robbins, as to whether there is any such thing as business law, to the views of Professor Schaub and the chairman, who reported that they were recasting their material in a business mould. The former, for example, presents sole-trader, partnership, and corporation side by side for purposes of comparison in each of a series of business transactions. The chairman in accordance with views elaborated by him recently in an article on the subject (*Journ. Pol. Econ.*, XXIII, p. 529) has renamed his courses: "the legal relation of buyer and seller; the legal relation of debtor and creditor; and the law of business associations."

The aim of courses in business law was not formulated. It was agreed to devote a meeting to the subject after the completion of the survey. Unanimity was discovered, however, on the main proposition—that the courses should strive to train a man in legal analysis as well as to inform. The emphasis of this feature goes hand in hand with the use of cases. So important did one teacher consider this training in the analysis of things as they happen that he objected to the use of simplified statements of facts in case-books. There were two sides to this argument, however. Still, the veering from the informational side to the training of the student in the ability to analyze and understand a legal situation, the ability, in other words, to know when a lawyer is needed, shows how far we have departed from the theory of every-man-his-own-lawyer that had pervaded commercial law books for two centuries.

NATHAN ISAACS.

In commemoration of the one hundredth anniversary of the admission of the state of Illinois into the Union, five members of the faculty of the University of Illinois have been commissioned to write a "Centennial History of Illinois" in five volumes, of which the one dealing with the economic development of the state will be prepared by Professor E. L. Bogart. The work was seriously threatened last summer by a decision of the state supreme court which declared the centennial commission as then organized unconstitutional, but it was reconstituted in January, 1916, by the general assembly, which was called in special session for this and other purposes. It is planned to publish the history early in 1918.

The Library of Congress announces the acquisition of about 1000 books and periodicals relating to social revolutionary movements in Europe since the beginning of the nineteenth century, which were col-

lected by Dr. Simkhovitch, of Columbia University. There are complete sets of "Le peuple," "Le voix du peuple," "Die neue Zeit," edited by Earl Kautsky, "Die sozialistische Monatshefte," and many Russian anarchist and terrorist publications.

The Library of Congress also announces further additions to the material for economic history in account books, accounts, and collections of correspondence. Important are the papers given to the library by Judge Lewis H. Jones, of Louisville, Kentucky, containing mercantile and family correspondence dating as far back as 1694. These papers relate to the tobacco trade in England, invoices of imports, prices, slave purchases, and the cost of family supplies. Among the diaries acquired is that of Edmund Ruffin in 25 volumes, 1856-1865. Mr. Ruffin was a successful scientific farmer on a large scale and a "firm believer in the economic system of the South."

Professor Emory R. Johnson, of the University of Pennsylvania, is preparing a volume on *The Panama Canal and Commerce*. His *American Railway Transportation* is being revised by Dr. T. W. Van Metre and will be published this summer under the title of *Principles of Railway Transportation*. With the assistance of Professor G. G. Huebner, Professor Johnson is also revising his volume on *Ocean and Inland Water Transportation*, which will appear under the title of *The Merchant Marine and American Commerce*.

Wilfred H. Schoff, the secretary of the Commercial Museum of Philadelphia, has continued his studies in the early history of commerce by publishing with a translation and with various illustrative material the Greek text of "The Parthian Stations of Isidore of Charax."

Mr. J. O. Rankin, of the College of Agriculture of the University of Missouri, is preparing an economic history of agriculture in Missouri.

Professor Ward W. Pierson, of the University of Pennsylvania, is writing a book on *Railroad Law* to be published in Appleton's Railway Series.

Professor George G. Groat, of the University of Vermont, is soon to publish through the Macmillan Company a book entitled *An Introduction to the Study of Organized Labor in America*.

The nineteenth volume of the *Review of Historical Publications Relating to Canada*, in the series of University of Toronto Studies, and covering the year 1914, devotes about 30 pages to books and articles in the fields of geography, economics, and statistics.

Professor James Davenport Whelpley's book on *The Trade of the World* has been translated into Italian (Fratelli Bocca, Turin).

There will shortly be issued in the Harvard Economic Series *The Financial History of Boston*, by Professor Charles P. Huse, of Boston University.

The Library of Congress has published a *Classification of Social Groups: Communities, Classes, Races, Completing Class II: Social Sciences* (pp. 24).

Ohio State University has published a pamphlet on *Country Life Week*, which was held at Columbus, August 2-6, 1915, compiled by Professor Paul L. Vogt (pp. 70). It has many interesting maps upon the various forms of social activity in the state of Ohio.

The New York School of Philanthropy (United Charities Bldg.) has issued a series of Studies in Social Work. Among those recently printed are: No. 4, *Is Social Work a Profession?* by Abraham Flexner (pp. 24); No. 6, *Section on Charity from the Shulhan Arukh*, translated by Louis Feinberg (pp. 31); and No. 8, *Facts about Tuberculosis, Twenty Diagrams with Brief Descriptive Text*, by Lilian Brandt (pp. 40). The price of each of these is 25 cents.

The Department of Surveys and Exhibits of the Russell Sage Foundation published in December, 1915, a pamphlet on its *Activities and Publications* (pp. 12). The bibliography contains references to the documents and reports made by the various surveys in the different parts of the country. There has also been received *A Survey of the Activities of Municipal Health Departments in the United States*, by Franz Schneider, Jr. (Russell Sage Foundation, pp. 22).

The Central Bureau of the Roman Catholic Central Verein (Temple Bldg., Broadway and Walnut St., St. Louis, Mo.) has published a fourth edition of *A List of Books for the Study of the Social Question*, being an introduction to Catholic social literature, revised by Louis F. Budenz (pp. 27).

The Massachusetts Committee on Unemployment has issued the draft of an act on *Unemployment Insurance for Massachusetts* with an introduction and notes, prepared by Ordway Tead, secretary (75 State St., Boston). This pamphlet contains the first published attempt in this country at unemployment insurance legislation.

The New Review Publishing Association, which publishes the *New Review*, an organ of socialism, plans to publish books dealing with

international socialism. In this series are to be noted: *Socialism and the War*, by Louis B. Bourdin; *Socialism of New Zealand*, by Robert H. Hutchinson; *Socialism after the War*, by Louis C. Fraina, and *Studies in Socialism*, by Isaac A. Hourwich.

Johns Hopkins University Circular, No. 10, December, 1915, contains a list of the publications of graduates of the departments of history, political economy, and political science, 1901-1915 (pp. 112).

Professor George H. Mead, of the University of Chicago, has an article in the *Survey* for December 25, 1915, on "Madison—A review of William H. Allen's report on the survey of the University of Wisconsin."

The *Labor Gazette* for January, 1916, contains a bibliography of official documents of concerted wage movements of railway employees, 1912-1915.

A recent issue of the *Intercollegiate Socialist* has a supplement "Who gets America's wealth?" written by William English Walling. Another supplement is announced on "Coöperation in the United States" (*Intercollegiate Socialist*, 70 Fifth Ave., New York).

Current news in regard to vocational guidance may be found in the *Vocational Guidance Bulletin* (109 Church St., Nutley, N. J.).

The *Monthly Review* of the United States Bureau of Labor Statistics, now in its first year of publication, contains in each issue a valuable bibliography of official reports relating to labor very fully annotated, and includes volumes published not only in this country but abroad.

The *Bankers' Magazine* of London has introduced a new feature in its educational section, namely, a department for the benefit of young women, who have been engaged in large numbers by the English banks to take the place of men engaged in military service.

The Department of History in Smith College has begun a quarterly entitled *Smith College Studies in History*, annual subscription, \$1.50. The editors are Professor J. S. Bassett and Professor S. B. Fay. The first number, October, 1915, is *An Introduction to the History of Connecticut as a Manufacturing State*, by Grace Pierpont Fuller.

A journal established during the past year is the *Monthly Transportation Register*, published by the Bureau of Applied Economics (Southern Bldg., Washington, D. C., price \$1). The managing editor is J. H. Bradford. This contains monthly reports of revenues and expenses of railroads, accident statistics, docket, decisions, and reports of the Interstate Commerce Commission, and railroad financial news.

The *Eugenical News*, a leaflet of four pages, will appear bimonthly in the interests of eugenic workers (Eugenics Research Office, Cold Spring Harbor, N. Y., price 25 cents).

A new quarterly journal entitled *The Military Historian and Economist* is issued by Harvard University Press. The editors are A. L. Conger and Professor R. M. Johnston, of Harvard University. Members of the advisory board are Professor C. J. Bullock, Professor Albert Bushnell Hart, Major James W. McAndrew, U. S. A., Justin H. Smith, and Professor O. M. W. Sprague. The first number, January, 1916, contains an article on "Financing the armed nation," by O. M. W. Sprague.

The Immigration Journal Company (3456 Macomb St., Washington, D.C.) announces the publication of *The Immigration Journal*, a monthly magazine to be devoted exclusively to immigration, naturalization, and closely related subjects. The first number appeared in February, 1916. The editor is Mr. W. W. Husband, at one time clerk of the Senate Committee on Immigration and later secretary of the United States Immigration Commission. Subscription price is \$1 per year.

Der Schweizer Volkswirt, published in German and in French is a new monthly journal edited by Walter Eggenschwyler (Zürich, Art Institut Orell Füssli, yearly price, 5 fr.). The first number appeared in November, 1915.

Appointments and Resignations

Professor Thomas S. Adams, of Cornell University, has been appointed professor of economics at Sheffield Scientific School of Yale University.

Professor George E. Barnett, of Johns Hopkins University, is to lecture at Columbia University through the first term of 1916-1917.

Mr. John Bovingdon is going to Keio University, Tokyo, Japan, as professor of economics.

Mr. John B. Canning has been appointed instructor in insurance at the College of Commerce and Administration of the University of Chicago.

Professor Chandler, of the University of Arizona, who has acted as expert to the Committee on Taxation of New York of which Senator Mills was chairman, has been appointed assistant professor of economics at Columbia University.

Mr. E. F. Damon, manager of the Villa Park Orchards Association, Orange, California, has been called to take the position made vacant by the death of Professor R. H. Ferguson at the Massachusetts Agricultural College.

Mr. Carson S. Duncan has been appointed lecturer in commercial organization at the College of Commerce and Administration of the University of Chicago.

Professor Williard C. Fisher is to carry on the work of Professor Jenks at New York University during the latter's absence for the second half of the current academic year.

Professor J. O. Gillin has been promoted to a full professorship in sociology at the University of Wisconsin.

Dr. K. R. Green is instructor in history and economics at Delaware College.

Professor Thomas L. Harris, of Carlton College, is professor of sociology at Miami University, succeeding Professor Vogt.

Professor Phillip S. Kennedy, of New York University, has been appointed Commercial Attaché and assigned to Melbourne, Australia.

Mr. Theodore Macklin has succeeded Mr. E. D. Baker as instructor in rural economics at the Kansas State Agricultural College.

Mr. G. H. Newlove has been appointed a research scholar on the Illinois centennial history which is being prepared by members of the faculty of the University of Illinois.

Mr. Edwin F. Nourse has been elected professor of economics at the University of Arkansas.

Mr. Herman E. Oliphant has been appointed assistant professor of business law in the College of Commerce and Administration of the University of Chicago.

Professor W. Z. Ripley, of Harvard University, is lecturing at Columbia University during the second half-year.

Dr. A. M. Sakolski, who is acting as secretary of the Valuation Committee of the Delaware and Hudson Company at Albany, is assisting Dr. Robert Tudor Hill in the courses in economics at Union College and is also conducting a course in corporation finance before the Albany chapter of the Institute of Banking.

Dr. Earl A. Saliers, for the part year instructor in accounting at Sheffield Scientific School of Yale University, has been promoted to the rank of assistant professor.

Professor H. R. Seager, of Columbia University, is absent on his sabbatical year from February, 1916, to February, 1917. He will probably go to South America and also expects to complete his book on trusts.

Professor E. R. A. Seligman has resigned the chairmanship of the committee on academic freedom of the American Association of University Professors and has been elected vice-president of the association.

Mr. Frederick M. Simons has been appointed instructor in industrial organization at the College of Commerce and Administration of the University of Chicago.

Mr. Carl C. Taylor is an instructor in the department of economics at Mt. Holyoke College during the second semester.

Mr. Robert H. Tucker is associate professor of economics at Washington and Lee University.

Professor Paul L. Vogt, formerly of Miami University, is now head of the department of rural economics and sociology at Ohio State University.

Mr. Russell Weisman is an instructor in economics at Mt. Holyoke College for the second half-year.

Professor Chester W. Wright, of the University of Chicago, has been granted a year's leave of absence and is traveling in the Orient.

Mr. Richard H. Ferguson, extension professor of agricultural economics at the Massachusetts Agricultural College, died December 1, 1915. He had just completed a very careful study of the marketing of milk in Massachusetts, the report of which is almost ready for publication. A scheme for securing coöperative credit, devised by Mr. Ferguson, is now recommended by the United States Department of Agriculture.

Professor Edward Van Dyke Robinson died December 10, 1915. Mr. Robinson held the chair of economics at the University of Minnesota from 1907 until the end of the academic year of 1915 and was then appointed to a professorship at Columbia University.

Professor John Christopher Schwab, librarian of Yale University, died January 12, 1916, at the age of fifty years. Mr. Schwab was made instructor in political economy at Yale in 1890 and in 1898 advanced to a professorship. In 1905 he was made librarian of the university. He was the author of *The History of the New York Property Tax and Confederate States of America, 1861-1865*.

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Inquiries and other communications regarding membership, meetings, and the general affairs of the Association, as well as orders for publications, should be addressed to the Secretary of the American Economic Association, Ithaca, N. Y.

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THE APPORTIONMENT OF REPRESENTATIVES

ANNUAL ADDRESS OF THE PRESIDENT

WALTER F. WILLCOX
Cornell University

According to an unbroken series of precedents running back to the origin of the American Economic Association, some thirty years ago, the President selects for the theme of his annual address either a fundamental economic problem or some phase of the relation between economics and our social, political, educational, or legal institutions. In breaking with this tradition I am taking a step which requires an opening word of explanation. The reason underlying the precedents and giving them their value is the principle that the man whom the Association has honored should offer in return whatever he has that seems most worthy of attention from the Association and the public. But of that he must be the judge. In the present case exceptional circumstances seem to justify an unprecedented choice. A brief statement of the circumstances may serve to secure for the subsequent argument a more indulgent attention.

The presidents of a score of American universities were invited some years ago by the Census Office to nominate graduate students of economics, one from each institution, who might assist in the study of various problems within its field of work. The Secretary of the Economic Association, who was temporarily in the employ of the Federal Government, had suggested that the invitation be given and was responsible for the results. His position had grown naturally out of his secretarial duties and was intended as a recognition of an extended report and accompanying papers just published by a committee of the Association.¹

Somewhat more than a year after this group assembled in Washington the results of the census of 1900 laid the basis for the apportionment law of 1901 and members of the group prepared for Congress the tables around which the prolonged discussion centered. While following these congressional debates they became interested in certain vexatious difficulties and anomalies in the method of apportionment, for the solution of which

¹ *The Federal Census, Critical Essays by Members of the American Economic Association collected and edited by a Special Committee, 1899.*

Congress naturally could not wait. So it cut the knot and turned to other business. The decision which Congress reached was seemingly devoid of justification in theory and had been rejected by all trained students who had faced the problem. Twenty years earlier, our first president, General Walker, had characterized a similar solution as losing "all hold on any principle governing the matter."

During the following decade members of the group continued a spasmodic discussion of the apportionment problem among themselves and with others, and, in 1910, when it again became urgent, a solution had been worked out which could hardly have occurred to any one of the group alone or to any member of Congress. The solution commended itself to the House Committee on the Census, aroused no opposition in House or Senate, and was speedily followed in the law. The fact that these members of our Association have contributed to elucidate the difficult problem may justify the choice of a theme remote from the field of economics as traditionally interpreted.

A few months before the group was brought together the president of the Association, in closing his annual address, had said: "I believe that the largest opportunity of our economists in the immediate future lies not in theories but in practice, not with students but with statesmen, not in the education of individual citizens, however widespread and salutary, but in the leadership of an organized body politic."²

It is somewhat in the spirit of President Hadley's speech at New Haven that I ask your attention to this theme. My immediate object is to present the reasons for believing that the problem of apportionment under the provisions of the Constitution, a technical problem to which at intervals through more than a century the attention of Congress, executive officers, and statistical experts had been directed, with only temporary and provisional success, has at length been solved by reconciling the demands of Congress with the conditions imposed by theory. My remote object is to show that the ground has been cleared for renewing under more favorable auspices that effort to check the steady and rapid increase in the size of the House of Representatives which was made in 1850 and abandoned in 1870.

Only two provisions of the Constitution bear on the present problem, one that "representatives . . . shall be apportioned among the several states . . . according to their respective num-

² A. T. Hadley, *Am. Econ. Assn., Economic Studies*, IV (1899), p. 28.

bers," and the other that "each state shall have at least one representative."

Between 1790 and 1911, inclusive, two fundamentally different methods of apportionment were employed, one method in seven apportionments and the other in six. It is theoretically possible, of course, that the two methods may be equally good or equally bad, but probably one method is better than the other and possibly one method is wrong and the other right. The two methods differ in that one, which I will venture to call the method of an assumed ratio, starts from an assumed number of persons to one representative, the number being usually but not necessarily a whole number of hundreds or thousands; and the other, which, but for the fact that it has long been called the Vinton method from the name of the representative who introduced it, might be named, in contrast to the first, the method of a computed ratio, starts from an assumed number of representatives in the House and computes the average number of persons to a representative by dividing the constitutional or representative population of the United States by that number. The quotient is then used as a divisor for the population of each of the states, a representative is apportioned for each unit in the resulting series of quotients, the sum of which under all ordinary circumstances is less than the number of representatives to be apportioned, the remainders are arranged in order of size, and a representative assigned to each in succession until the desired total is secured. This method sometimes leaves one or more major fractions, or fractions larger than one half, without an additional representative and sometimes gives an additional representative for one or more minor fractions, results which have been serious stumbling-blocks to Congress but are inherent in the method.

The Vinton method was used at every census between 1850 and 1900, inclusive; the method of an assumed ratio was used at every census between 1790 and 1840, inclusive, and again in 1910. The latter method has taken two forms, one in which all fractions after division are disregarded in the apportionment, and the other in which all fractions larger than one half entitle the states wherein they occur to an additional representative. These two may be called the method of rejected fractions and the method of major fractions.

After this preliminary clearing of the ground my main thesis may be stated as follows: The method of major fractions is the correct and constitutional method of apportionment.

To determine what is the correct and constitutional method a test of correctness is needed. The requirement that representatives shall be apportioned among the several states according to their respective numbers cannot be strictly and exactly met. Probably no two states ever have had or ever will have exactly the same number of inhabitants to one representative. This fact does not authorize Congress to disregard the constitutional mandate, but does oblige it to interpret the phrase by reading into the Constitution at this point the words "as near as may be," so that the requirement means, representatives shall be apportioned among the several states according to their respective numbers as near as may be. This is the substance of the claim made by Daniel Webster in his committee report to the Senate in 1832,³ which convinced that body and ten years later convinced both Houses that the method of apportionment which had been followed by Congress theretofore was unsound, if not unconstitutional. A bill drawn in conformity with Webster's position reached President Tyler in 1842. He finally signed it, but at the same time filed a memorandum expressing doubts regarding the constitutionality of the innovation. Since Tyler's day no serious dissent from Webster's position has been expressed, I believe, either on the floor of Congress or elsewhere, and it may be accepted as unchallenged. It affords one criterion whereby the apportionment of representatives to any state may be tested. If there is doubt, for example, whether State A is entitled to ten or eleven representatives, three ratios are needed: (1) the number of persons to one representative in State A with ten representatives, (2) the same in State A with eleven representatives, (3) the same in the United States. The nearness of the first and second ratios to the third, or standard, is then measured, whichever ratio is nearer to the standard is accepted, and State A assigned the corresponding number of representatives.

This is the test and the only test which can be derived from Webster's argument. It is of great help, but it does not completely solve the problem.

A second test, to be set beside Webster's, is suggested by the original object of apportionment. This was to give the more populous states the larger representation in the House to which their numbers were thought to entitle them and which they did not receive in the Senate. From the fundamental purpose of ap-

³ *The Works of Daniel Webster* (Little and Brown, Boston, 1851), III, pp. 369ff.

portionment it follows that a method giving the populous states systematically either more members or fewer members per unit of population than the small states is incorrect.

We have, then, two criteria, of a just and constitutional apportionment: first, the ratio in each state must be as near as may be to the standard ratio; and, secondly, the method must hold the scales even between the large and the small states.

The ratio either for the country or for a state is usually expressed as the average number of persons to one representative. For example, under the apportionment law of 1911 there were 211,877 persons to a representative. But for my purposes it is better to conceive that each inhabitant of the country or of a state has an equal interest in a representative and to express that interest in the form of a decimal, such as .000005 or .0000047 or .00000472. A further improvement gets rid of the long decimals by taking a round number of people, say 10,000,000, as a unit and computing the number of representatives to that unit. When ratios are stated in this form, the meaning is more quickly grasped through ear or eye and comparisons between two ratios are more easily made.

Armed with these criteria of a correct apportionment, we are in a position to approach the problem. Because of the historical interest attaching to it I will first apply the tests to the apportionment of 1832, the last made under the method of rejected fractions. The ratio used in the bill before the House was one representative to 47,000 people, which is equal to 213 representatives to 10,000,000. Under this ratio Massachusetts was entitled to 12.99 representatives and the question before Congress was, Should it receive 12 or 13? If it received only 12 representatives, it would be at the rate of 197 to 10,000,000 people; if 13, it would be at the rate of 213 to 10,000,000 people, the standard ratio. Tried by Webster's test of nearness, then, Massachusetts was entitled to 13 representatives and was defrauded by receiving only 12. It is not surprising that Edward Everett in the House and Daniel Webster in the Senate joined in a vigorous, though in its momentary effect an unsuccessful, onslaught upon a method which led to such results.

They did not notice, however, and since that controversy ended, no one, I believe, has remarked, that the system of rejecting all fractions, even those as large as .99, confers an unjust advantage in the long run upon the populous states, among which at the time

Massachusetts held a leading position. If there are eleven states, one of 10,000,000 and ten of 1,000,000, and all remainders are rejected, the chances are that the ten remainders of the small states will in combination be several times as great as the one remainder in the large state. Or in the case of Massachusetts in 1832, with a ratio of one representative to 47,000 people and 12 representatives, the apportionment against which Everett and Webster protested, that state would have had, to be sure, only 197 representatives to 10,000,000 people, far short of the standard 213; but the smallest five states then in the Union, which together had a population somewhat less than that of Massachusetts, would have received only 172 representatives per 10,000,000 people. Massachusetts would have fallen 16 below the standard, but they would have fallen 25 below Massachusetts. Massachusetts would have had a rejected fraction of .99 but they would have had rejected fractions amounting in combination to 2.38.

To test the conclusion that the method of rejected fractions favors the populous states I have reapportioned the House for every decade between 1790 and 1840 by applying the method of apportionment employed in 1910 to the conditions and compared the results with those actually embodied in the laws. The states which were given too many representatives between 1790 and 1840 include New York and Massachusetts, each of which received four more than it deserved, Pennsylvania, which received three more, and Virginia, which received two more. Among the smaller states Delaware should have had four more than it had, Vermont three more, New Jersey two more, Connecticut, North Carolina, Tennessee and Missouri one more. Thus, during the first five decades of apportionment, the populous states as a group got thirteen representatives more than they were entitled to and the small states, as a group, thirteen less. The efforts of Everett and Webster, called forth by what looked like a serious injustice to Massachusetts, led to the introduction ten years later of a better method, but in so doing overturned a method by which in the long run Massachusetts had profited as much as any state in the Union.

I conclude that the method of apportionment used between 1790 and 1830, under which all fractional remainders were rejected, is incorrect and unconstitutional and that for two reasons: first, it does not apportion in each state as near as may be to the standard and, secondly, it regularly results in over-representing the populous states.

If this conclusion is correct, but two methods of those which have been tried remain to be examined, the method of major fractions and the Vinton method. The arguments in favor of the former and against the latter are of two classes: practical arguments likely to gain the attention of members and committees of Congress; and theoretical arguments appealing to statisticians and mathematicians, but with little meaning for the general public. During the prolonged controversy the solution reached by Congress has at times appeared to theorists indefensible and the solutions proposed by theorists have seemed to Congress unjust or incomprehensible. In this controversy I believe that Congress has usually been right in its instinctive judgment, but unable or indisposed to furnish a convincing defense of its decision, and that the theorists, while better equipped with arguments, have been defending an untenable position.

The fundamental difference between the Vinton method and the method of major fractions, as already explained, is that the former starts from an assumed number of representatives and the latter from an assumed ratio. So we are brought face to face with the question, Which is the correct point of departure? Certain practical considerations likely to affect the choice of Congress between these methods will first be presented and later the more theoretical arguments.

The method of an assumed ratio is implied in the Constitution, which says, "The number of representatives shall not exceed one for every thirty thousand." The purpose and result of this clause were to limit the size of the House. If the Convention had had in mind a method starting with a number of representatives, it would have been more natural to make the clause read, "The number of representatives shall not exceed x (e.g., 120 or 112)." The phrasing of this limitation indicates that in thinking of apportionment the members of the Constitutional Convention of 1787 instinctively began with a round number of persons to each representative. Yet the form of the limitation was doubtless influenced also by a desire to open the way for an increase in the size of the House as the population of the country grew.

Until long after the fathers of the Constitution had passed off the stage, this method was followed without hesitation or challenge.

When the change to the Vinton method, or method of a computed ratio, was made, it was not from dissatisfaction with the method of an assumed ratio in the form it took after 1840. The main

motives for the change were a desire to end the rapid increase in the size of the House of Representatives and a desire to withdraw a vexatious and contentious question from the arena of public discussion. The way was not then open, as it is now, for accomplishing either purpose if the method of an assumed ratio was retained.

There are two serious difficulties with the results of the Vinton method. It often results in a major fraction which does not entitle the state to another representative; it sometimes results in two consecutive tables in which the total size of the House differs by one, but in the larger House the number of members from some state is one less. The latter possibility first came prominently before Congress in the tables prepared in 1881, which showed that if the House had 299 members Alabama was entitled to 8, but if it had 300 members Alabama was entitled to only 7. Hence this anomaly has come to be known at the "Alabama paradox." When Congress has faced the rejection of one or more major fractions under the Vinton method, it has assigned new members for those fractions in defiance of the method's requirements. When it has faced the Alabama paradox, it has avoided the difficulty by choosing another table from the series. Thus neither of these anomalies has occurred in any actual apportionment.

Under the system of an assumed ratio the number of representatives in a state depends upon the initial ratio and the population of the state, and not at all upon the population of any other state or of the country. Thus, if serious errors had crept into the enumeration of any state and been discovered after an apportionment law had been passed, and if the method of an assumed ratio had been used, the errors would have affected only the state in which they occurred, but if the Vinton method had been used they might have affected other states.

The only way in which the method of major fractions in the form used in 1840 and revived in 1900 failed to meet the needs of Congress was that it could not furnish for the scrutiny of members a series of tables, each apportioning one more representative than its predecessor. The improvement introduced in 1910 resulted in removing that difficulty. To explain the innovation we must return for a moment to events in the winter of 1900-1901. When the Census Office began the preparation of apportionment tables from the figures of the Twelfth Census, it decided to employ all the methods which had ever been used. For this purpose two sets of tables were constructed, one following the

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Vinton method, the other following the method of an assumed ratio in its two forms, rejecting all fractions and rejecting only minor fractions. In preparing the second set of tables the divisors were successive multiples of 500. But a change of 500 in the divisor did not regularly change the number of representatives by one. Often no change, often a change of two, occasionally one of three appeared, and in only one third of the cases did the results of successive tables differ by one representative. Of the two numbers of representatives most considered by Congress, 357 and 386, the former being the existing number and the latter the smallest number under which no state would lose a representative, neither occurred in the second series of tables, following the method of major fractions. Nevertheless, in its decision Congress showed indirectly but convincingly its preference for that method, by selecting the Vinton table for 384 members and adding two representatives for major fractions which, in the table, received no such consideration. Evidently Congress needed a series of tables meeting two requirements, each table apportioning one more representative than its predecessor and every major fraction entitling the state where it occurred to an additional representative; had sought to meet these conditions by translating the results of the Vinton method into those of the method of major fractions; and to do so had broken with the principle on which the Vinton method rests.

To understand how the needs of Congress were met in 1910 we may start with a divisor of six million, which is contained in New York State's population of nine million 1.5 times. Under the method of major fractions a divisor of six million would assign New York two members and every other state one. Let the divisor be reduced unit by unit and each of the series of quotients will slowly increase; when the divisor falls to about five million, the quotient for Pennsylvania rises above 1.5 and that state becomes entitled to a second representative. Let the divisor continue to fall; at about three and three fourths million Illinois becomes entitled to a second representative, and at three and two thirds million New York becomes entitled to a third. By continuing this process a House of any desired size may be apportioned under the method of major fractions. To determine at what ratio the claim of any state to any specified number of members matures and to arrange the ratios for the several states, boundary ratios, as I have ventured to call them, in one series following the order of

decreasing size is a simple problem of elementary mathematics.⁴ Then, by assuming as a ratio for division any number between two consecutive boundary ratios, an apportionment table may be constructed which will distribute one more representative than a table constructed by the use of any ratio lying between the next larger pair of boundary ratios. The tables which result lack no characteristic mentioned as desirable and have no characteristic mentioned as undesirable in the congressional debates of the last eighty years. They were accepted in 1911 without any opposition in committee, House, or Senate.

Here the case might be rested and a verdict awaited. But before the bar of theory, or in the judgment of an Association like ours, the verdict of Congress will not be conclusive. I turn, therefore, to an examination of the theoretical advantages and disadvantages of the two competing methods.

The Vinton method starts with an assumed number of representatives and divides the constitutional population of the United States by that number to determine the ratio. This step involves a fundamental theoretical error. It overlooks the crucial fact that seats in the House of Representatives are of two classes, the 48, one for each state, which are guaranteed by the Constitution and are as completely beyond the control of Congress as the seats of the Senators are, and the remainder, the number and distribution of which are under congressional control. The two classes might be named the apportionable and the unapportionable seats. The fact that they are not individually distinguishable has apparently been responsible for the failure to recognize their existence.

To get this theoretical requirement clearly in mind it may be helpful to think of the seats in the House of Representatives as numbered. The first 48 seats, one for each state, would be numbered one to indicate that there is no basis for distinguishing between them. The next seat, numbered 49, would be apportioned to New York, number 50 to Pennsylvania, and so on.

If the first representative falling to Pennsylvania or New York is as irrelevant or disturbing a factor for determining the ratio as the single representative falling to Nevada or Wyoming, then clearly the ratio cannot be found by dividing the constitutional population of the United States by the number of representatives. Nor have I been able to discover any other way by which the pop-

⁴See the writer's letter of explanation in 61st Cong., 3d sess., H. R. 1911, pp. 9-44.

ulation to one representative can be computed from the population of each state and the size of the House.

The effect of this false start is felt in certain anomalies or paradoxes to which the Vinton method gives rise.

A method theoretically sound should apply equally well to the entire range of possibilities whether of interest to Congress or not. The smallest possible House would consist of 49 members, 48 unapportionable and one apportionable, the last obviously going to New York. But if the population of the country is divided by 49 and the population of each state divided by the quotient, as the Vinton method prescribes, New York and Pennsylvania would receive four members apiece, even if no fractions were recognized, and only 41 members would remain to be apportioned among the other 46 states. Near the lower limit of possibilities the Vinton method yields results which are obviously absurd.

A method theoretically sound should never produce the Alabama paradox; under the Vinton method this paradox frequently occurs. In 1901 the majority of the House Committee on the Census recommended that there should be no increase in the size of the House, its number at the time being 357. But in the set of tables we prepared under the Vinton method Colorado received two representatives with a House of 357 or 358 members and three not merely for every higher number but also for every lower number down to 350, where the series of tables began. It was more than difficult, it was impossible, to persuade the House that these results were equitable, and its dissatisfaction with them had no little influence upon its decision to reject the report of the majority and accept that of the minority, substituting another number and table from which the Alabama paradox was absent.

A method theoretically sound must be reversible. Thus, if the House is to contain 435 members, that result might be approached either by adding representatives *seriatim* from the minimum of 48 or by withdrawing them from some number much above 435. A method proposed by Seaton and endorsed by Walker in 1882 was tested by Congress far enough to show that it uniformly favored the populous states and was incontinently rejected on that ground. But if the same method had been reversed and the result approached by successive subtractions rather than successive additions, the outcome would have been just as definitely favorable to the small states.

A method theoretically sound should hold the balance true be-

tween the large and the small states. That the Vinton method has a tendency, slight but persistent, to over-represent the large states is demonstrable. The tendency may be illustrated by the difference between the results of the two methods applied to 357 members. The Vinton method of 1900 gave Colorado and Florida each 2 representatives, while the method of major fractions gave them 3; the Vinton method gave Michigan 12 and Texas 15, while the method of major fractions gave Michigan 11 and Texas 14. Which is correct? The standard is the assumed or computed ratio, the two differing slightly but each indicating 48 representatives to 10,000,000 people. If each of the small states received 3 seats, their ratio would be 56 to 10,000,000, an excess of 8; if each received 2, their ratio would be 38 to 10,000,000, a shortage of 10. Obviously the result giving each of them 3, reached by the method of major fractions, is "as near as may be." Obviously, too, the Vinton method results in under-representing the small states.

For the populous states the outcome depends upon whether the assumed or the computed ratio is made the standard. If the assumed ratio is accepted, then to apportion the smaller numbers to the populous states gives to those states ratios nearer the standard, but if the computed ratio is accepted, there is a very slight balance in favor of the larger numbers. Even if the computed ratio is used, however, the net balance tips in favor of assigning the two seats in question to the smaller states. The result is confirmed by examining the figures for each state separately. Our analysis of this example, then, shows that the Vinton method unjustly, and therefore unconstitutionally, under-represents the small states and over-represents the large ones. These results might be confirmed, if there were time, by making a similar examination of the apportionment of 386 seats in 1900 under the two methods. It would show also that the apportionment of 386 seats by the method of major fractions gives exactly the results which Congress secured illegitimately, as we then believed, by starting with the Vinton table for 384 and adding two for disregarded major fractions. This is an indication that the instinctive judgment of Congress guided them to the right goal although they started on a wrong road.

A method theoretically sound should establish the balancing point between two consecutive numbers of seats, or the size of the fraction entitling the state to another seat, at the middle point or arithmetic mean and not at the geometric mean. This

is a necessary corollary of the preceding position, but needs especial mention, because the use of the geometric mean has recently been advocated. To use it, however, not merely would run counter to the unvarying conviction of Congress that every major fraction gives a valid claim to another seat, it would also result in defeating the main object of the Constitution, which is to hold the scales even between the small and the large states. For the use of the geometric mean inevitably favors the small state. If it were necessary to favor either group, the large states might be entitled to more consideration in the House, because the small states are favored in the Senate. But, fortunately, there is no need to favor either.

As a question of pure mathematical theory, apart from all consideration of motive and from all practical arguments about the judgment of Congress, I find no unanimity of expert opinion in favor of the geometric mean. I have laid the problem before two meetings of the Mathematical Club at Cornell University, and, although no vote was taken, I inferred from the discussion that there was a preponderance of opinion in favor of the arithmetic mean. Thus the theoretical arguments of statisticians and mathematicians point to the same conclusion to which Congress had already been brought by other considerations and establish my thesis, that the method of major fractions is the correct and constitutional method of apportionment.

The House of Representatives is now more than six times its size before the first census and four times its size immediately after that. Within the half century since the only law passed with a design to check its growth was last put in force, it has increased by more than four fifths. While it has been thus expanding, no similar change, I believe, has occurred in any other representative assembly in this or any other country, with perhaps the exception of the lower House in Austria, where the conditions are unique.

If its present rate of growth should continue for another century, the House would include about 1,400 members. Such an expansion is unlikely and perhaps in the interest of efficiency the increase ought soon to slacken or to stop. From this point of view the change made in 1911 gains new importance. It is now possible for Congress to prescribe, in advance of an approaching census, how many members the House shall contain, to ask the Secretary of Commerce to prepare a table apportioning just that

number in accordance with the method of major fractions, and to report the result to Congress or to announce it by executive proclamation. The experiment which was tried in 1850 and 1860 and which then failed, partly because of inherent defects of method which have since been overcome, and partly because of problems, no longer important, which arose out of the rapid admission of new states and the absence of many members during the Civil War, can now be repeated with more chance of success. As the House is larger by four fifths than it was in 1856 and rapidly growing, the arguments against further increase are stronger.

With a firm grasp of the elements of the problem and a century of experience revealing what Congress regards as the essentials of a sound method, the chance of meeting the conditions are better. Ere long the pressure of opinion within or without the halls of Congress is likely to result in a renewal of the effort to fix the size of the House unalterably. If that effort is made, the removal of the technical difficulties to which your attention has been called this evening will have smoothed the path toward success and have made it more likely that when the change is again introduced it will be permanent.

PROBABLE CHANGES IN THE FOREIGN TRADE OF
THE UNITED STATES RESULTING FROM
THE EUROPEAN WAR

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International commerce is subject to world-wide competition, and the success achieved by any country in foreign trade depends upon the four well-known factors of efficiency in production, skilful methods of merchandising, adequate international banking facilities, and economical means of transportation by land and sea.

The prerequisite of a large trade with foreign countries is diversification and efficiency in production, and this, in turn, is the result of a territorial division of labor and industry that enables each section of the country to engage in those activities for which it is best equipped as regards climate, resources, and labor supply. It is when the productive energies of a country are so organized that all the various resources are intelligently utilized, and that labor and capital are applied where they will produce the best results, that an annual output of maximum volume may be secured at a minimum unit cost.

To enable a country as large as the United States to engage, with all its resources and energies, in industrial competition with other countries and sections of the world, its domestic industries and its foreign trade must be served by adequate and economical means of transportation by land and sea. The country as a whole needs to be supplied with railways, such inland waterways as fulfill present-day transportation requirements need to be improved or provided, and the rail and water routes need to be so coördinated and their management and use so regulated as to make it possible for all parts of the country capable of settlement and development to engage, so far as their natural resources permit, in the production of those commodities that the country can profitably exchange for the foods, materials, and wares of other countries.

It seems important, in discussing the probable effects of the European War upon the foreign commerce of the United States, to emphasize the fact (here briefly stated because it is a commonplace with economists) that neither a larger opportunity to trade abroad, nor the development of ocean transportation and international banking facilities will necessarily be followed by a large

growth in the country's foreign commerce. The attainment of absolute and relative efficiency in production should be kept in view by business men and by the government in plans made to secure for the United States the commercial advantages obtainable as a result of the European War.

It is evident that the war has begun to change the attitude of business men and the policy of the government towards foreign trade. There is a greater realization of the importance of foreign commerce and a clearer appreciation of some of the requirements to be met in securing and holding a larger foreign commerce. This change in the attitude of the American people towards trade with other countries is, in part, a result of certain purely temporary effects of the war. The unprecedented opportunity afforded American producers by the sudden outbreak of a war involving the countries which carry on the major share of the world's international commerce, the large increase in the exports and imports of the United States and the consequent profits from this greater trade, and the rapid increase in the output of foods, materials, and manufactures to meet the abnormal foreign demand gave the people of this country the greatest object lesson they have ever had concerning the possibilities of foreign trade and the ability of American industries to meet the demands of foreign buyers.¹

The experiences of the past year have also given business men and public officials of the United States a forceful demonstration of the simple economic truth that a large increase in the volume of exports can not long continue without a corresponding increase in imports. For several months the balance of trade has been so "favorable" as seriously to hamper the commerce of the United States with other countries.

The fact has also been brought home to the people of the United States that the market for American goods in foreign countries is limited by the ability of foreign buyers to secure the means of

¹ It is not deemed necessary in this paper to present a statistical analysis of the effects of the war upon the export and import trade during the year ending June 30, 1915. Such an analysis has been made in an article published in *Modern Business Supplement*, 3d quarter, 1915, issued by the Alexander Hamilton Institute, New York City. Dr. G. G. Huebner in a paper read before the Academy of Political Science in the city of New York and published in its *Proceedings* has pointed out statistically the changes that the war caused in the foreign commerce during the fiscal year 1914-15. The publications of the United States Bureau of Foreign and Domestic Commerce contain detailed statistics of the foreign commerce of the United States.

payment for the commodities they may desire to purchase. Although South American countries were unable to purchase commodities in Europe, they did not and could not buy more largely in the United States, because their financial dependence upon Europe was so great that the war caused a serious disturbance of financial conditions in South America and greatly reduced the purchasing power of the people of that continent. American producers not being disposed to render South American countries the financial assistance they had been receiving from Europe, those countries were unable to maintain their normal industrial activity or their usual volume of foreign trade.

Another lesson that the European War has already taught American producers is the need of a greater diversification of the industries in this country, and the use, for industrial purposes, of some important materials and resources that are now wasted or unused. The textile industries and other lines of production have, in the past, been to a large extent dependent upon foreign supplies of dyes and chemicals. Chemists say that these dyes and chemicals can be manufactured in the United States as well as they are made abroad, although temporarily at a higher cost than foreigners can furnish the products. It is said that a large initial investment of capital is necessary to establish and maintain a plant for the manufacture of dyes. The present duties on coal-tar products other than dyes are ten per cent *ad valorem* and are thirty per cent on coal-tar dyes, but these duties are said by chemists and manufacturers to be too low to give necessary protection against foreign competition. Apparently, it would be well to afford adequate temporary protection to dyes of various kinds during the early years of their manufacture in this country.

One of the recognized limitations upon the development of foreign markets has been the ineffective merchandising methods followed by American exporters. In spite of a long continued campaign as to the necessity of the adoption by American exporters of the methods employed by Europeans in the sale of goods in foreign markets, only a few of the large concerns, like the Standard Oil Company, the United States Steel Corporation, and some others have found it advisable to adopt the methods which experience seems to have proven necessary to follow in order to sell American goods in South American and other foreign countries successfully in competition with foreign commerce.

The European War has, however, so impressed the business men

of this country with the possibilities of foreign trade that business organizations are now giving greatly increased attention to methods of marketing American products abroad. The National Foreign Trade Council, which was organized in 1914, is concerning itself with the problem of how to secure a larger merchant marine. The National Association of Manufacturers, the American Manufacturers Export Association, the Chamber of Commerce of the United States, and other more local organizations are considering what needs to be done to bring about the development of foreign trade and the increase of the merchant marine.

The larger interests which the Federal Government is taking in foreign commerce is evidenced by the present activities of the Federal Trade Commission, which is investigating the advisability of permitting American producers to form associations or combinations to maintain foreign sales agencies. If the investigation leads to an affirmative conclusion on the part of the commission, that body will doubtless ask Congress so to amend the Sherman Anti-Trust Act as to permit the formation of associations or combinations for the management of foreign trade. The Bureau of Foreign and Domestic Commerce is conducting an increasingly active campaign in the interest of foreign trade development. The publications of the bureau and the addresses of its chief have laid emphasis upon the trade possibilities created by the European War.

The war has brought about the establishment of foreign branches by at least one large national bank. Before the war began, the Federal Reserve Act provided that: "Any national banking association possessing a capital and surplus of \$1,000,000 or more may file application with the Federal Reserve Board, upon such conditions and under such regulations as may be prescribed by the said board, for the purpose of securing authority to establish branches in foreign countries or dependencies of the United States for the furtherance of the foreign commerce of the United States."

Acting on the authority thus conferred, the National City Bank of New York has established three branches in Brazil, one in Argentina, one in Uruguay, and one in Cuba. While this is an encouraging beginning, it is only the first step. The successful financing of the future foreign trade of the United States calls for the establishment, by numerous strong American banks, of branches in different parts of the world. It is to be hoped that the experiment of the National City Bank will be so profitable as to cause other strong banks to establish foreign branches.

Mr. William S. Kies, of the National City Bank, is authority for the statement that over one hundred European banks have established branches in foreign countries.² The number of such branches is said to exceed two thousand. There are more than one hundred in South America, about three hundred in Asia, four hundred in Africa, and more than seven hundred in Australia, New Zealand, and the Pacific islands. These two thousand branch banks scattered over the world have assisted European capitalists in making investments abroad and have, without doubt, been of great assistance to the foreign trade of European countries.

Closely connected with international banking facilities are agencies for financing and promoting American trade and industrial enterprises. As this paper is being written, announcement is made of the incorporation in New York State of the American International Corporation with a capital stock of fifty million dollars. This company is closely affiliated with the National City Bank, whose president is the chairman of the board of directors of the International Corporation. The purposes of the formation of the new corporation, as stated by its president, Mr. Charles A. Stone, of the firm of Stone and Webster of Boston, is to do "an international business and to promote trade relations with different countries which will help make a world market for our products; for the financing and promoting the development in foreign countries by American engineers and manufacturers of great public and private undertakings; for the assisting in financing and the rehabilitation of industries in foreign countries; for the purpose of undertaking such domestic business as seems advantageous in connection therewith."

Mr. Frank A. Vanderlip, the chairman of the board of directors of this corporation, states that the formation of the company "is the logical thing to do at this time. It [the company] will stand for the development of America along financial and commercial lines and will tend to sustain America's position. . . . This is not a banking project, the National City Bank will do what banking business is necessary."

Companies such as the newly organized American International Corporation can be of great aid in the development of the foreign trade of the United States. By bringing about a greater use of American capital in foreign industries and enterprises a sure basis

² See *Modern Business Supplement*, 3d quarter, 1915, pp. 298-299, issued by The Alexander Hamilton Institute, New York City.

will be laid for a larger trade between the United States and other countries. The foreign commerce of Germany, Great Britain, France, Belgium, and Holland has been greatly assisted by the foreign investment of the capitalists of those countries. The destruction of capital now taking place in Europe will probably limit, for some time to come, the foreign investments of European capitalists, and will increase the opportunity for American financiers to engage in foreign industrial and commercial enterprises.

The European War has brought about a notable change in the attitude of the American people towards the merchant marine. The public realizes more than ever before how completely the foreign trade of the United States is dependent upon the services of ships under foreign flags, and, during the past year there has been almost constant discussion in the press and on the rostrum of possible ways and means for building up the American merchant marine. Unfortunately, no program of legislative action has yet been formulated that promises very large results. The problem of increasing the merchant marine to adequate proportions within a reasonable period of time is still unsolved and calls for serious study on the part of legislators, economists, business organizations, and men engaged in the transportation business.

The importance to American commerce of having a larger tonnage of ships under the national flag is not seriously questioned. It is quite true that freight rates in times of peace do not depend upon the flag of the vessels that perform the transportation services, and that the owner of a ship or manager of a line of vessels ordinarily serves one shipper as willingly as another; in time of war, however, shippers and consignees of neutral countries are limited to the services of vessels under the tonnage of the national flag, of vessels of neutral foreign countries, and of such ships of belligerent countries as may be available and may be safely used. The burden placed by the present war upon the commerce of the United States and other neutral countries is extremely heavy. Freight rates are many times their normal figure, and the shortage of tonnage has seriously limited the foreign trade of the United States, in spite of the fact that the seas are controlled by the belligerent country under whose flag nearly one half of the deep-sea tonnage of the world is operated. If the European War were being waged upon the sea as widely as it is being fought on land, the foreign commerce of the United States would be practically paralyzed at the present time.

While no one will seriously question the advantage of having a

large merchant marine under the national flag during such a war as is now in progress, there are those who question the commercial necessity of a merchant marine under the national flag during times of peace. Merchant vessels of all nations, it is argued, compete with each other to secure the traffic of all countries; and, freight rates on the ocean being subject to this competition, it does not matter to the people of the United States, or of any country, whether their commerce be handled in ships of national or foreign register. The argument, however, is not convincing.

The traders in a country having a large foreign trade require the services both of vessels operated under charters and of steamship lines running to the principal markets of foreign countries. The steamship line provides a service at regular intervals. Its agents solicit the freight of small shippers as well as large ones and thus are of assistance to exporters who begin in a small way to build up a foreign trade. Moreover, there is no doubt that the managers of a steamship line will seek most actively to develop the traffic to and from their own country. A steamship line under the national flag is an agency for the development of foreign trade.

The importance to a country's foreign commerce of having under the national flag a large tonnage of vessels that may be operated under charters, i.e., "tramp" steamers, is not so definite nor so vital as is the advantage of having a number of vigorous steamship lines under the national flag; but it can hardly be doubted that the commerce of Great Britain has been much aided by the enormous tonnage of British steamers operated under charters. The foreign commerce of Great Britain must derive substantial benefit from having more complete ocean transportation facilities than has the foreign commerce of any other country.

If one result of the European War should be to impress strongly upon the people of the United States the advantage of having a larger tonnage of shipping under the national flag, is it too much to hope that Congress will earnestly seek to adopt a maritime policy intended to assist in building up the American marine? Up to the present time differences of opinion without and within Congress have prevented constructive legislation regarding the merchant marine, but the European War may, and ought to, make it possible for the advocates of different merchant marine policies to agree as to the desirability of creating a federal shipping board or of adding to an enlarged Interstate Commerce Commission a marine department. Such a shipping board, or marine department, consisting of three commissioners expert in maritime

matters, would be a logical agency through which to act in developing a larger merchant marine.

While it is not the purpose of this paper to discuss the policy that should be adopted by Congress for the development of the merchant marine, it may be suggested, in passing, that the proposed shipping board or marine department might well be directed by Congress to investigate the shipping and navigation laws of the United States and other countries, and to report, for adoption by Congress, a revised code of maritime laws under which American shipping may compete upon fair terms with shipping under foreign flags. It would also seem wise for Congress to make a liberal appropriation of funds to be expended by the shipping board in aid of a limited number of steamship lines from the United States to foreign countries. Congress should leave to the board the selection of the lines to be aided, the amounts to be paid, and the determination of the provisions of the contracts made on behalf of the United States with the lines aided. This method of procedure would give promise of better results than can be obtained by the passage of subsidy laws such as have previously been enacted by Congress. The development of American shipping, whether by subvention or otherwise, is an administrative task that should be intrusted to an able body of experts vested with ample discretionary powers.

The proposed shipping board or marine department should not have the power to engage in the steamship business, either directly or indirectly. It would be a mistake for Congress to adopt the policy of the government ownership of ocean vessels, or of the operation of vessels through the agency of a corporation controlled by the government.

Adequate ocean transportation by ships under the American flag can be secured only by making the ownership and operation of vessels profitable. Private capital and initiative must be depended upon to bring about the development of the American merchant marine. In the long run, legislation can only aid in making the business of ocean transportation attractive to owners of private capital and to men ambitious to devote their energies to the management of steamship lines. Ocean transportation is not a business adapted to government ownership and management.

The European War has, without doubt, convinced the people of the United States of the inadequacy of the merchant marine under the national flag; but the merchant marine, important as it is, is only one of three links in the chain of facilities required for

the transportation of the import and export trade of the United States. The other parts of the chain are the railways which provide inland transportation, and the seaboard terminals at which rail and water carriers exchange traffic. The strength of the chain as a whole is the strength of each link.

To meet successfully the keen competition for the world's international trade that will prevail after the war, the foreign commerce of the United States will require the services of seaboard terminals at which traffic may be exchanged between railways and ocean carriers with maximum dispatch and minimum cost. The importance to commerce of efficient terminals is more fully realized in some foreign countries than it is in the United States. Liverpool, Antwerp, Rotterdam, Hamburg, and other European ports are planned, equipped, and administered with a view to minimizing the expenses of foreign commerce. When, after the war, American manufacturers and merchants have to compete with foreign producers and traders striving earnestly to regain lost ground, the necessity for a more systematic development of American ports can hardly fail to be realized. Should this prophecy come true, we may see the railroad companies and state and municipal authorities co-operating in harbor and terminal improvements, and we may see ports developed according to plans that will provide specialized facilities for different kinds of traffic, that will insure the physical connection of the railroads with the ocean carriers at all piers and wharves, both private and public, and that will so unify all transportation facilities as to secure for each port maximum efficiency and economy in the handling of both foreign and domestic commerce.

As a closing word, it may be well to suggest the necessity of being on guard against overestimating the probable effects which the European War will have upon American commerce. International financial and trade relations that have been slowly built up and firmly established are not easily changed. The present war has given the United States an opportunity to secure a larger place in the world's trade; but the permanency of the advance that may be made while the war is in progress will depend upon whether capitalists in the United States desire to participate largely in the industrial development of South America, Asia, and Africa, whether American manufacturers and merchants shall decide to strive systematically and persistently to increase foreign trade, and whether the Federal Government shall make the promotion of foreign trade a definite aim.

PROBABLE CHANGES IN THE FOREIGN TRADE OF THE UNITED STATES RESULTING FROM THE EUROPEAN WAR—DISCUSSION

M. J. BONN: The foreign trade of the United States after the war will be affected by many individual circumstances; its future development will depend to no small degree on the principle governing the future trade relations between the nations. During the last century the economic life of nations has been based on the principle of international interdependency in an ever increasing degree. Will that principle be maintained or will the world return to the principle of isolation and national self-sufficiency, which was the trade ideal of days gone by? The answer can only be given after an inquiry into some of the economic lessons of the war.

That the war would stop the trade between belligerent nations was no surprise to anybody. Given a war of such magnitude an enormous economic dislocation was unavoidable. The imports which Germany, for example, had received from her enemies were 43.5 per cent of her total imports.

But the war did more than that. It affected the trade between neutrals and belligerents to an unexpected degree. That the belligerents would levy an embargo against the neutral nations on goods they wanted at home, as the British embargo on wool, was reasonable and legitimate. Nor could Russia's grain trade to neutral countries be maintained, as its route lay through the Dardanelles. On the other hand the almost total annihilation of the German-American trade is due to a deliberate action of a belligerent, to the so-called blockade enforced by England. It may be illegal, but it is a fact. As far as her power goes, England has stopped the trade between different neutral nations, whenever she was afraid of goods, of non-contraband goods too, reaching the enemy. She will not permit the provisioning of those countries if they do not give guarantees of not trading with the enemy. That interference cuts both ways: A country like Sweden, neutral in the spirit as well as in the letter, has put an embargo against Russia whenever she had to lay one against Germany. Sea power as well as geographical position interferes in the trade between neutrals. Roumania cannot export wheat except through the Central Powers' territory, and Switzerland is entirely surrounded by belligerents.

A rupture of trade relations on a far bigger scale than was ever expected is not the only lesson of the war. Settlements of individuals and influx of capital into foreign countries have played a large part in

business life before the war. So far as men liable to military service were concerned, it was quite natural that they should be interned in a hostile country. This was done with Russian laborers in Germany and with German reservists in England. But one did not expect the rounding up of foreign-born men who were not part of the army and who were willing to follow their peaceful occupations, as happened first in England. And nobody foresaw that naturalized citizens whose ancestors had acquired citizenship a hundred and more years ago would be deprived of their property, as was done in Russia with German settlers, and that more recently naturalized citizens would be greatly interfered with in their business relations, as was the case in England. Nor was it expected that the citizens of belligerent states inhabiting neutral countries would be unable to return, even if in no way connected with the army.

A great part of international trade was based on capital investments in foreign countries. It has always been assumed that the selling of foreign securities would be an excellent way of providing funds in time of war. Here too, expectations were disappointed. The closing of the stock exchanges made many millions of securities unsaleable. The relative weakness of French finance during the war is due to that circumstance. It was found, moreover, that the public owning first-class securities were unwilling to part with them, notwithstanding the extra profits given by a falling exchange. It is true that large blocks of foreign securities were sold. But even this is not a tightening of international credit ties; it means a wiping out of an existing debt, and with it the curtailment of that share of international trade which was due to payment of interest.

We are going to see that "nationalization of capital," which before the war was advocated strongly in France and to a lesser degree in Germany. For the breakdown of stock exchanges at the beginning of the war is not the only argument against foreign investment. Many securities on the London and in the Paris stock exchanges, some of them English but many foreign, were the property of foreigners. To-day all such property belonging to "alien enemies" is withheld from its owners. For example, the interest on American or Brazilian railway bonds listed in London is paid to a trustee but not to the owners. Up to March 1, 1915, this trustee accounted for over \$400,000,000. On the other hand, the non-payment of Turkish and to a certain degree Austrian coupons is a very severe blow to French investors. It seems to me that the war has shown the danger of international interdependence to an unexpected degree. European economists had discussed

this problem long before the war. I think they underrated it. They reckoned with a war of short duration, and they expected the neutrals to be strong enough to prevent the disturbances of neutral trade. In both respects they have been mistaken. Part of that interference is no doubt illegal, as put on record by the United States government. Though these records state these facts in an unanswerable way they do not change them. If we cannot prove to ourselves and to the world that this war is the last war possible, resumption of normal trade relations is possible only by nations taking these experiences into account.

The danger of dependence today is felt by all nations, though not to the same degree. The strain is slightest in England, though even she does feel it. If the index number in England for grain and meat, which was about 580 in 1913, had risen to 834 last October, that was partly due to a shortage of tonnage, and partly due to the absence of Russian Roumanian supplies, which even the control of the sea could not get for England. England draws a great many of her supplies from abroad. She cannot, so long as the war goes on, pay for them in goods. She must part with gold or with securities, or contract loans which will annihilate the benefits of some foreign investments. She cannot commandeered these goods in foreign countries as she could do in her colonies and she has to pay exploitation prices for them. Moreover, the continuation of those supplies depends on the good will of foreign nations. Her present immunity from interruption of communications is due in part to the strength of her navy. It depends partly on her geographical position. And her freedom from serious attacks and the possibility of trying a policy of starvation against Germany is due to an alliance. In a purely Anglo-German conflict England could never have tried such a policy. And alliances between ambitious world-powers are no basis for permanent security. England, however, has no choice. She must rely on oversea supplies. She is an island accessible from all parts of the ocean; even a superior navy could scarcely blockade all her coasts. She cannot hope to maintain a growing population, which even today is the densest in Europe, on two small islands. She will have to rely on the continuation of outside supplies, but she will try to diminish the danger of depending on oversea supplies by shifting their base to her colonies. Why should she again become dependent on Russian grain supplies or on German sugar in the future?—or on the good will of neutrals in continuing supplies to her good-naturedly, whilst she hampers their trade?

To have achieved such a feat once without being punished for it is enough for a wise nation. As it is she feels the strain rather severely

of having to continue an export trade with neutrals, for fear of losing their markets, whilst she ought to use all her energy at home. Some of these dangers can be lessened by bringing about a form of Imperial Federation, as outlined by the late Mr. Chamberlain. In the British dominions a nationalization of British labor and capital may be achieved approaching the ideal of a self-sufficient state. Financial and political reasons which have worked against that scheme before will favor it now. Inter-imperial communications, it is true, are sea communications too, and exposed to hostile attacks. It may suit England when peace is established to safeguard them by adopting the principle of the free sea. But even if she does not do so she has learned from her own experiences that the legitimate connections between neutrals and belligerents may be cut without any risks of punishment. That being so, inter-imperial trade, the trade between different ports of the possessions of a belligerent, is not more subject to hostile interruption than international trade.

The most severe consequences of the war's influence on international relations have fallen on Germany. Three of her neighbors are closing her land frontiers; her unfavorable geographical position, with no really open outlet to the sea has put her oversea trade at England's mercy. Her neutral neighbors are too weak to be able to insist on neutral trading rights. Until lately she has been cut off from most of her foreign supplies. (She was of course less dependent on foreign supplies than England.) Her territory, and that of her Austrian ally, is almost four times the area of the United Kingdom, whilst their population is not quite three times as large. She has been able to go on, notwithstanding all pressure. But her present achievement does not give any guarantee that she will be able to stand a similar ordeal in later times, when her population may have doubled. Perhaps peace will establish the principle of the open sea, making the policy of starvation more illegal than it is today.

Will the guarantees obtainable do away with all danger? If this is not the case, Germany must achieve economic security on a wide continental area. A commercial federation between Germany, Austria, the Balkan States, and Turkey can lay the territorial foundation on which a policy of self-sufficiency on a broad continental base may be possible. This was an old idea, pronounced many years ago by Friedrich List, in the days when Austria and Turkey were near neighbors. But even such a broad territorial expansion, based not on domination but on co-operation, will not bring about complete self-sufficiency. Self-sufficiency is only possible if all goods essential to a nation's life can be

found within its confines, and that in sufficient quantities. No territorial expansion fulfills this condition. Even a commercial federation reaching from the North Sea to the Persian Gulf would not produce all commodities in the quantities wanted. But a new movement has been gathering speed lately: systematic substitution of national goods for imported commodities. It began more than a hundred years ago, when beet sugar took the place of cane sugar; it achieved a significant triumph when synthetic indigo took the place of the natural product. During the war great progress has been made. Nitrate made from the nitrogen of the air and later on from ammonia has taken the place of imported nitrate. A nitrate monopoly is proposed by the German government, to prevent the swamping of the industry after peace is made. Natural rubber is being supplanted by artificial rubber. The place of cotton in the manufacture of explosives is taken by materials derived from wood. This movement will go on after peace is made.

Moreover, the war has given the warring nations a statistical knowledge of their business life they never possessed before. It has developed socialization to an unexpected degree. Production and consumption are now brought to a common level not by marketing but by organization. Capital and labor will be directed towards those industries where they are wanted. Limitations of quantities will be used in combination with the old established methods of customs tariffs and railway rates. A differential taxation will see to it that the nation's necessities will not be sources of private surplus gains, as is outlined in the German bill for taxation of war profits. For those articles which are essential but which cannot yet be produced at home in the needed quantities, the government will create importation monopolies, as Switzerland has done in regard to grain. And government storehouses may again be the order of the day. Labor and capital will be nationalized to a much greater degree than ever before.

These movements cannot be restricted to one nation. If Germany is leading just now, it is because she was most severely hit by the interruption of international relations. But the other belligerents, and all European neutral nations, have been taking steps in the same direction. And the nations will not return to the old state of affairs. The ideal of national self-sufficiency was nowhere more widely discussed before the war than in France. Why should a nation whose population does not grow, and which has an enormous colonial empire within a day's journey, compete in the markets of the world? Why should she invest her savings in foreign countries, and risk income and capital during a time of war? Surely France has learned the lesson by now

that in international relations the creditor is at the mercy of the debtor, and not otherwise.

Russia, on the other hand, is in the position of the debtor. A great share of her exports was always "ear marked," so to speak, for the payment of interest. Her debt will grow immensely by war loans placed abroad, and by foreign imports for which she cannot pay with grain, owing to the closing of the Dardanelles. Moreover, as long as England holds Gibraltar and the Suez Canal, as long as the Baltic remains a closed sea which communicates through three narrow channels with the North Sea (closed easily in its turn by England's position and by England's navy) Russia's export will never be free, even if the Dardanelles were forced. She has felt the heavy burden an agricultural country has to carry when going to war without a sufficient industrial outfit for the production of modern war material. Russia has strong inducements for carrying out the economic ideal of her nationalists,—a self-sufficient Russian Empire. All this will, if I can read the signs of the times, not make for an increase of foreign business relations. The original basis of international exchange is the diversity of natural economic conditions existing in different countries. The growing size of the different business territories has greatly diminished the importance of this cause. Natural advantages of production are replaced by artificial advantages which are brought about partly by inventions and partly by organization. If security rather than wealth become the aim of organization, its scope will be almost unlimited.

I do not believe foreign trade will stop. The small countries like Denmark and Switzerland cannot hope to do without foreign trade. They must go on, on the same precarious basis on which they have suffered so much today, if they do not of their own free will enter the commercial federations of their neighbors. The young countries of the New World will have to go on producing raw material and they will have to find markets for it. The big exporting industries in Europe, which are accustomed to have a big surplus production, will not like to give up profitable markets. Big ports and large steamship companies will go on catering for trade. Outlying colonial possessions will not be given up. But the obstacles to foreign trade will increase, not diminish. Commercial competition may perhaps become more intensified in some selected neutral parts of the world. The economic dependence of the great nations upon each other will not be as close as it has been before.

G. D. HANCOCK: Professor Johnson has stated the necessary factors and prerequisites of a large foreign trade; he has described the

opportunity which exists for the expansion of the foreign trade of the United States; he has cautioned us against too great hopes for the realization of these opportunities; and he has, in the largest part of his paper, discussed what program the United States ought to adopt to aid in the promotion of larger foreign trade. He very wisely refrains from making any definite forecasts of the future course of our foreign trade after the European War.

The economist turned prophet is on unsafe ground in the present case, because so many of the causal factors are unknown and unknowable. Before we could predict the changes in the foreign trade of the United States resulting from the European War, I should say that among other things we should need to know the following: the duration of the war; the outcome of the war; whether the United States is to be drawn into the war; the exact effect of the war on the investments of foreign capital in the United States; the effect on interest rates in Europe and in the United States; the effect on the general price level in Europe and in the United States; the result of the war on the spirit of nationalism or internationalism, that is, of exclusive national policies; and also the eternal uncertainties of political action of the United States, in its shipping policy, its tariff policy, and its general attitude toward foreign trade promotion.

Since most of these things are beyond human knowledge at present, I wish to avoid even seeming to forecast any positive results. A few suggestions can be made, however.

In the first place, the fact needs some emphasis, well-known as it is, that our most important trade is not with South America but with Europe. Our trade with South America has grown very rapidly during the war, and it had grown rapidly for some years before the beginning of the war. But it is only a small part of our foreign trade, and as compared to our normal trade with Europe it is of much less value to us. In 1913, the last year unaffected by the war, our trade with South America formed only about eight per cent of our total foreign trade, and we exported over ten times as much to Europe as to South America. Our most important trade for all time past has been with Europe, and whatever affects that trade is of the utmost importance to us. The chief importance of South America, of course, is the fact that it is looked upon as a growing market for our new and growing surplus of manufactured products.

Up to the present time the results of the war that may affect our foreign trade in the future are: (1) the importation of large amounts of European capital, or the return of large amounts of American se-

curities formerly held abroad; (2) the development at feverish speed of a large number of highly specialized industries for supplying the belligerent countries with munitions of war; (3) the establishment and rapid expansion of certain other industries, such as chemicals and dyes, under the extreme protection afforded by the stoppage of European importations during the war; (4) the supplying to a considerable extent of markets temporarily abandoned by the belligerent nations; and (5) the beginning of a rapid growth in merchant marine under the United States flag.

Some of the results of these changes may probably be predicted. If the European holdings of American capital should all be cancelled by the constantly growing balance of exports to Europe two important results might follow: first, this will make it necessary for us to export less or to import more, in order to keep our foreign balance straight; and, secondly, it may possibly give to the United States a sufficient surplus of capital to extend our investments into foreign countries, and thus remove or reduce one of the greatest obstacles to the expansion of our foreign trade in the newer countries such as South America—the obstacle, I mean, due to the lack of capital investment in those countries.

The development of the "war order" industries is in many cases only temporary, but in other cases these plants (which will have been paid for by war orders) may be used or modified for continued domestic or export production. It remains to be seen whether the new industries developed in the United States by the war can stand European competition after the war; or whether they will go down under this competition as did the new manufactures and shipping of the United States at the close of the Napoleonic wars.

It does seem, however, as if some of the obstacles to the development of trade with our southern neighbors may be removed by the war. American capitalists may now look more and more to Latin America for investment and development of new enterprises; political relations are much closer among the American nations since the beginning of the war; American banks are being established in South America; the beginnings of an American merchant marine are probably in sight (if this is really a factor of any great importance); and Americans ought by this time to be convinced that their merchandising methods need some revision.

When we look at our trade with Europe, however, we see different probabilities. Europe will still need our raw materials and we shall need many of her manufactures. But if the United States should be-

come a debt-free nation instead of a debtor nation; if we build our own merchant marine; if we continue the diversification of our own industries, to include the production of these dyes and chemicals and other manufactures heretofore imported from Europe; how will Europe pay? That is, if we cease to import the two hundred to three hundred millions a year of the service of foreign capital, the twenty-five millions a year of foreign owned transportation service, and the many other millions of manufactures which, it is said, we are to produce for ourselves, then the balance of trade would tend to be permanently in such a condition as at present, which is impossible. If all these things happen, we shall certainly either export less or import more—somewhere.

The very increased efficiency of internal transportation recommended in the paper will tend to promote internal trade as well as external. And certainly the diversification of industries tends to make a nation less dependent upon foreign trade. The size of this country and the great diversification of its resources make foreign trade of much less relative importance than domestic trade.

Another factor that must be considered is the one which Professor Bonn has so ably discussed—the probable result of the war in developing a stronger spirit of nationalism in all the nations. The “parliament of man, the federation of the world,” seems to some to be the probable result of the war. If this should be the result the obstacles to international trade would undoubtedly be removed, and we should see in the future the free-trade economist’s ideal of international division of labor. I agree, however, with Professor Bonn, that the more probable result will be the strengthening of the spirit of nationalism. More exclusive national policies may be expected which, in the case of Germany and her allies and the other continental countries, will undoubtedly take the form of direct attempts to make the nations or the league of nations self-sufficient, by the use of tariffs and subsidies. In the case of Great Britain this nationalism will probably take the form of continued domination of the seas and the establishment of some form of imperial customs union. This will be a return to the policies of the Mercantilist period, and will mean the planning of domestic and international policies on the assumption that war is the normal condition. Much as we may regret it, this movement seems most probable.

In any case, European markets for the future seem very uncertain, both for the economic reasons I have suggested, and for the political reasons just discussed.

CARL E. PARRY: We will all agree, I think, with the general drift of Professor Johnson's paper. The war has brought it home to us that we are face to face with a new situation which calls upon us to readjust our attitude of mind and to reshape some of our policies and institutions. But as yet we are not quite sure that we understand this new situation. Some of us, like Professor Bonn, think that the world has learned that too much international trade is a bad thing, because it produces too much interdependence. If this is so, we may look forward to a period of trade restriction, and govern ourselves accordingly. Others of us are impressed with the great and growing importance of the foreign market; we look forward to an expansion of international trade, and feel that we must prepare ourselves to take our share of it. It seems to me important to determine which of these two contrasted views is most likely to turn out to be right.

We have heard this morning a sincere plea for the ideal of national self-sufficiency. If it represents the present temper of Germany, as we have reason to believe that it does, we have one more example of the spirit of nationalism which seems to have been so much intensified during the present war. This spirit prevails, and has increasingly prevailed, on the whole, throughout the world for more than a generation, and it is likely, in my judgment, to lead to commercial results of great importance for our own foreign trade. It is likely to lead, in short, to another era of high protective tariffs.

After the Franco-Prussian War, and after our own Civil War, the world witnessed an era of higher tariffs,—in Germany, in France, in the United States, in Canada, and in Australia,—practically everywhere except in the mother country of the British Empire, and tariffs went up, on the whole, until the outbreak of the war. Russia was preparing to raise her tariff, largely on Germany's account, when the war broke out; she will probably do so after the war. The protectionist sentiment in France, already strong, seems to be growing stronger. Part of it demanding commercial discrimination against the Central Empires. Germany and Austria are almost certain to form a closer tariff union than they have had before. England has a war tariff which she is not likely to get rid of very easily; imperial sentiment is stronger throughout the British Empire than it has ever been before; the formation of an imperial customs union is not beyond the range of possibility. We cannot be oblivious of these prospective moves on the part of our best customers. I think we must expect a period of higher tariffs that will hamper the trade of the world, including our own foreign trade.

Most of us, I suppose, subscribe to the ideal of international specialization, of international division of labor, which it was the great service of the classical school of economists to construct and to make popular. Most of us hate to anticipate any narrowing of the field of international trade. Most of us look upon the erecting of higher tariffs throughout the world, with a view to national self-sufficiency, as the recrudescence of an old ideal. But for all that, a period of restriction seems to be before us.

This period, let us hope, will be only temporary. The effect of the war in stimulating world-wide interest in foreign trade will help perhaps to shorten the period of reaction. But we cannot now foresee how long it will last. Meanwhile our own hand in the great game of international commercial diplomacy will be increasingly harder to play. We shall need to know to what extent, if necessary, we can make ourselves industrially self-sufficient; we shall need to know at just what points tariff revision on our part can bring pressure to bear upon other nations whose tariffs we wish to influence; we must pursue a more definite and more continuous commercial policy. And we must, in particular, give international considerations more weight in the determination of our tariff questions. We must pay more attention to the effect of some proposed revision of our tariff upon Brazil, and Germany, and Canada than to its effect upon Wyoming, Massachusetts, or Louisiana. And if we are to have continuity of policy, dominated by international considerations, we need to have more thorough and scientific investigation into the pertinent facts. We need more research of the kind that the government has recently been making into the chemical industries. Perhaps we need some sort of tariff commission or international trade commission, not altogether because it has more power than private investigators to get at the facts, but also because it is in a better position to give them authoritative publicity. It often happens that commissions do not find out anything that scholars do not already know, but the findings of a commission command more public attention. The great point is that if we are to consider our own tariff questions in a more international spirit and with more attention to international considerations, there must be some means of educating public opinion, the opinion of the man in the street, to this international point of view. More and better investigation and more publicity seem to me indispensable to this end.

About a generation ago we began in this country to appreciate the fact that in the past we had been exporting goods that had practically marketed themselves, but that in the future we should need to export

goods for which markets had to be made and found. We began to see that we need to learn how to sell our goods abroad. And business men saw that they needed, among other things, to get together. It was this perception that led to the formation of such organizations as the National Association of Manufacturers, the Philadelphia Commercial Museum, and the American Manufacturers' Export Association, of which Professor Johnson spoke. It was this movement which bore fruit in the establishment of the Department of Commerce and the Bureau of Foreign and Domestic Commerce and in the improvement of the consular service. And one of the chief effects of the war has been to show us that this movement for getting together must be accelerated. Business men must learn to work together better, with less suspicion of one another. I do not know exactly how this is to be done. The multiplication of trade associations can do a good deal toward accomplishing it. But it is certainly an imperative need of the business world, and the prevailing war is doing a great deal to bring this idea home to all of us.

B. OLNEY HOUGH: It is a satisfaction, but by no means a surprise, to find Professor Johnson warning against an exaggeration of the effects of the European War on American commerce. Our foreign trade, at least our export trade, will continue to be after the war, as it was before, precisely what the merchants and manufacturers of the United States make it.

Of all the elements named as entering into this problem—efficiency of production, skillful methods of merchandising, adequate international banking facilities, economical means of transportation—that of merchandising methods stands out as the first indispensable necessity for the increase of our export trade.

What Professor Johnson calls "one of the recognized limitations upon the development of foreign markets, the ineffective merchandising methods followed by American exporters," is properly so described only in part. But, unfortunately, the criticism undoubtedly does apply in certain especially notable directions. Such names as the Standard Oil Company, the United States Steel Products Company, mentioned by Professor Johnson in his paper, naturally immediately suggest the promotion of business relations in other countries in ways that seem to commend themselves as peculiarly wise. They are, however, to be supplemented by a long list of other American manufacturers,—the makers of Singer sewing machines, of National cash registers, of several different kinds of typewriters, of Kodaks, some of the great

meat packers, two or three shoe manufacturers, and others. By no means all of them are to be qualified as "large concerns," nor do all of them "find it advisable to adopt methods employed by Europeans" in the sale of goods in foreign markets. The Standard Oil Company, for example, originated its marketing policies; it set an example even yet only partially and not so effectively imitated by foreign oil companies. The warehouses of the United States Steel Products Company in Chile have no exact counterpart on the side of European producers of iron and steel goods, although the Steel Products Company is something more than a producer. To a considerable extent it is an export merchant, buying an appreciable part of its supplies from works outside of its own organization.

Undoubtedly the most notable development of present foreign trade conditions has been the formation of financing companies—for there is already in the field at least one other than that mentioned by Professor Johnson. This other came into existence earlier in the season, quietly and with no flourish of trumpets, rather with an apparent desire to shun publicity, organized like the later one by an important contracting firm supposed to be closely allied to different great banking interests. Capitalized at only \$1,000,000, the press almost overlooked it until one day the news leaked out that negotiations by it were on foot to take over and regenerate practically the whole railway system of another nation.

These companies should be forerunners of a dozen others. Both of the present, all of the future, can or should bring to pass actually great results to American commerce. Markets for foreign government bonds through our exchanges and investment-security bankers will certainly be a favorable influence. The awakening of the American public and above all American manufacturing concerns to the desirability of investments in other kinds of foreign bonds, in those of the classes commonly denominated "industrials" and "municipals," will be far more important as affecting our export trade. Clearly the banker and the supplier of goods must coöperate.

Professor Johnson's views as to an American merchant marine are sound, now as always. Yet it is not to be forgotten, so far as our export trade is concerned, that we as American shippers really have little to say as to routes which merchandise ordered from us shall take. It by no means necessarily follows that when American ships are available our foreign customers will instruct us to ship their goods on those flying American flags,—they may prefer other vessels. But there is a singular lack of comprehension as to what a merchant marine

is, frequently observable in this country, even in public discussions of this subject. Our talk is commonly of "lines from New York" here and there, of "lines from San Francisco" to other destinations, of "lines from New Orleans," and so on. Professor Johnson rightly observes that we require services "both of vessels operated under charter and of steamship lines." But does he not confuse chartered boats and liners, master of the subject as he is, and does he not convey a mistaken impression in speaking of "vessels operated under charter, i.e., 'tramp' steamers"? Probably every "line" of steamships in existence of no matter what nationality frequently employs "chartered boats" (boats not owned by it, only leased) when conditions or the exigencies of traffic require or make that course advisable. Some "lines," properly so-called because they maintain regular sailings between certain ports, are operated only by chartered boats. This is more common practice, possibly, in the shipping trade of the United States, yet it is not unknown in Europe.

The real distinction is not between "liner" and "chartered" ship but between passenger liner and cargo carrier. Do we require—would it pay ship owners to maintain—elaborately fitted passenger boat lines from New York to Cape Town or New York to Melbourne? It may reasonably be doubted. All great British lines operate some strictly cargo boats; some of them have few passenger ships, or if their ships have any passenger accommodations they are limited and the passenger trade is not sought, as, for example, the "Parrots" of a well known British line conspicuous with their red and green funnels in ports of the eastern Mediterranean and Black Sea before the war.

If the multiform and multi-colored wisdom of Congress fails in itself to devise relief from admittedly intolerable restrictions on American shipping, what hope remains that Congress will consent to resign its powers to a shipping board, especially if that board is to be entrusted, as Professor Johnson suggests, with the expenditure without congressional dictation of "a liberal appropriation of funds"? A shipping board seems eminently advisable none the less. But the most imperative necessity is to impress Congress with the will of the people that the board be wisely selected, free from the taint of politics or at least partisanship, and that the opinions and advice of the board, once so wisely selected, be heeded,—that it be not found necessary to consider "expediency" in putting its recommendations through the House and the Senate. This presupposes hard and active work on the part of the business men of the United States,—something more, a great deal more, than the mere passing of resolutions. Ship owners may be trusted to

show their patriotism, as well as their ability to operate ships, when placed in a position to do both without undue loss to themselves, and when in that position no Acts of Congress will be required to prevent their transferring vessels from the American to some other flag, as was actually proposed a week ago.

It is always difficult to withstand the temptation to scold our American manufacturers, even to swear at them. All of us have done our share and will probably continue the practice. Perhaps, little by little, this criticism and scolding may help in bettering some business practices. But one great outstanding fact stares us in the face: American exports of manufactured goods (exclusive of foodstuffs) grew from less than fifteen per cent of our total exports in 1880 to nearly forty-nine per cent in 1913. From 1900 to 1913 our exports of manufactured goods grew 126 per cent. Explain it as you will, say that this extraordinary growth, greater than Germany or any other manufacturing nation has shown, occurred in spite of ourselves, that we did not deserve it, yet there the figures stand.

In the exuberance of our American patriotism it may be that we are disposed to overestimate the share of the world's trade that should be ours. Just as we ourselves have imported, must and always will import, enormous quantities of sundry supplies from virtually every other country on the face of the globe, so it is and always will be with other countries. All do now, as they always must, import goods from virtually every source of supply. Our ambition should be to increase our own trade, to win away a small part of the imports into other markets now controlled by some competing nations. We cannot get all the trade of all countries, or indeed of any country. Such assertions as that made not long ago by a former minister to a South American republic that the United States ought to control seventy-five per cent of the import trade of that republic are nothing less than absurd. Let us set reasonable bounds to our ambition.

Stupid things as figures are, glance over the endless columns of the import and export statistics of any of the Latin American republics. You will find that from ten per cent (Costa Rica) or eleven per cent (Mexico) up to thirty-three per cent (Salvador) or forty-three per cent (Colombia) of the total imports of any of these republics consists of "textiles." Taking Latin America as a whole the average works out at between eighteen per cent and twenty per cent textiles of the total imports. In the case of British India, nearly fifty-five per cent is textiles. Even in Australia it is sixteen per cent. Eleven and two-thirds per cent of the imports of our own United States is made up of

textiles. In textiles are included tissues and other manufactures of cotton, silk, wool, hemp, jute, and other fibres. Clearly, if between eighteen and twenty per cent of the total imports of Latin America is made up of much the same goods as we ourselves import and from the same sources, on this account alone we of the United States cannot hope to secure seventy-five per cent of Latin American import trade. Certainly not unless or until our manufacturers in these lines experience a radical change of heart.

It is in the textile branches that American manufacturers have their greatest, their boundless, opportunities. It is in precisely those branches that the greatest inertia prevails, an inertia that is provokingly, distressingly un-American, not to say medieval. Excellent as are our domestic silk goods and our woolen goods, American mills have never made, are not today making, any effort discernible through a microscope to secure trade in the world's markets even for specialties in which we compete and even excel. Many people doubtless have been led to think that shipments of "cotton goods" have ranked high in the list of exports. Of the total of \$51,000,000 worth of "cotton goods" for the fiscal year ending June 30, 1914, a normal year, forty-three per cent, nearly one half, was composed of rags, waste, and apparel such as corsets and knit goods. Eliminate these and compare the total of cotton piece-goods, the very richest of all export fields, only about \$28,000,000, with our exports of \$33,000,000 worth of automobiles or \$36,000,000 worth of leather; compare American exports of \$28,000,000 in cotton piece-goods with England's \$600,000,000. Why, we ourselves actually import a third more manufactured cotton goods than we export—we, a cotton growing and manufacturing nation!

What is wrong here? Several things. First of all, antediluvian selling methods, mills, mill agents, brokers, jobbers,—complicated, costly, without enthusiasm, adaptability or originality, stuck fast in old ruts; second, manufacturing organization and trade methods which neither know or recognize change, much less are willing to contemplate the possibility of change,—methods which perhaps have grown up with or on account of home trade or have themselves developed home trade along its present lines, radically differing from, diametrically opposed to trade lines of other countries. The labor problem is by no means to be minimized. Our automatic machines turning out heavy sheetings and drills by the mile in standard unvarying counts, widths and pieces, at the minimum manufacturing expense, won for us pretty much all the trade we ever enjoyed in the Levant, the Red Sea district, India, and China. Excepting in these special products we have never

gained trade save only when the advent of American traders and the institution of free trade with the Philippines opened a market there, along what cotton men probably call "American lines," for printed cottons and a few, a very few, "fancies." Our goods pay twenty per cent lower duties on entering Cuba than do the goods of European manufacturers. We are only four days' freight time distant from Cuba's largest port. In spite of these emphatic advantages we have only so far succeeded in acquiring about one fifth of Cuba's imports of cotton goods.

Most Americans, one is disposed to boast, will stoutly declare when possible business of enormous volume is in sight, "We'll try." This seems not to be the motto of American cotton mills, big, rich concerns, contrasting most unfavorably with thousands of smaller manufacturers in other branches. No great expense is inevitable in changing some trade methods in order to give a foreign customer pink and blue only instead of trying to force him to buy also purple and green which his customers dislike and refuse. No serious drain on a manufacturer's resources, no heavy investment of capital is required, to give a foreign client the same design next year that he had and liked last year. The determination to do these things must be noticeable. It has not yet been discovered in the United States.

We have talked a great deal about our cotton piece-goods trade to China. England has been selling China almost exactly twice the value of such goods as the United States exports to the whole world. When we say that the world's textile trade as a whole is the particularly bright and shining mark for us, we may better realize the fact when we learn that England's export trade in cotton, wool, silk, and other textiles amounted in 1913 to about \$950,000,000, almost one half the total value of the whole export trade of the United States of all kinds of products to all countries. Germany's exports of textiles have amounted to about \$300,000,000 a year.

"Probable changes in the foreign trade of the United States resulting from the war"? How much depends on what American manufacturers make of their opportunities in textiles alone? We need not aim commercial arrows at the hearts of nations so sorely suffering, so savagely struggling today. Any inroads on their trade which we may make because of today's conditions will not be serious handicaps to them when commerce and industry again become approximately normal. They make, perhaps always will make, some merchandise better or cheaper than we can. A wonderful and extraordinary opportunity now presents itself to us to secure for some kinds which we may easily manufacture a comparatively easy introduction, at insignificant expense.

If we turn to the statistics of American export trade and roughly classify them into two divisions, one in which competition of other producing or manufacturing nations is a most important element affecting our development, the other that in which competition is not an appreciable or at least a vital element, we shall discover that only about one third of our total export trade should be classed as strictly competitive. Of course, all trade and all branches are competitive in some degree, but surely we may count in the non-competitive class our exports of raw cotton and mineral oil which together count for half of this whole class, the non-competitive. Add our exports of lumber, tobacco, copper, breadstuffs, meat, and dairy products and we have nearly made up the sum of two thirds of our total export trade from items in which competition in any emphatic degree is not unduly burdensome.

Turn the page to the remaining one third of our export trade, say \$750,000,000 out of \$2,300,000,000, and examine its details in order to hazard a guess as to how the end of the great European War will leave our position in the world's markets.

The one great outstanding item in this competitive class is that labeled "Iron and steel and manufactures of," amounting in 1914 to \$251,000,000, or more than one third of all our exports in what we have called competitive merchandise. However, we may as well eliminate from this classification all of the primary products of iron and steel, for, when all is said and done, competition in them is generally and probably rightly regarded as not always a matter of ruling domestic prices nor as always based on cost of production as commonly estimated.

Orders for bars, sheets, steel rails, wire, wire nails may be, are, and undoubtedly will be secured by American manufacturers when they want them or need them, or as policies adopted as affecting both the present and the future may dictate. Ways of developing foreign markets for such primary products may vary according to the inclination of the producers. Certainly wise and farsighted policy will indicate the adoption of methods of marketing and shipping which will bring costs as low as possible, no matter what relation foreign bear to domestic sales prices. If the ownership or control of steamships seems required in order to secure transportation facilities when needed and at practicable rates, then we may expect to see that course adopted by great steel and iron companies as it has been by other manufactures and merchants in the fruit, oil, molasses, tobacco, lumber, sugar, and other trades. Theoretically, there seems small choice between the policy of opening one's own warehouses in foreign markets and the maintaining of consignment stocks in the hands of independent agents

under close supervision and control of American manufacturers. In one market we may expect to find one course adopted, in another market the other course, just as is today the case.

At present American iron and steel are practically unobtainable by foreign buyers for from three to six months to come. Buyers are beggars today, so great have been the demands on our mills, forced in our direction because of curtailed European supplies. The end of the great war will apparently bring about only this change in our export trade in this particular branch: possibly more of our great producing companies will have been encouraged by trade and profits to look with favor on some foreign markets for the distribution of tonnage. There is a chance, too, that more producers will utilize and cultivate connections established abroad, may even go so far as to create facilities for the placing of tonnage most economically. But in this particular trade a number of elements affect exports other than calculated costs of production or of marketing, both in the United States and among European manufacturers.

We must not overlook the fact that under the heading of "Iron and steel and manufactures of" there are included in our statistics many items by no means belonging among those "primary products" which we have just been considering. There is the whole great class of machinery (\$14,000,000 in 1914) and many smaller items ranging from safes and lawn mowers up through bath tubs, razors, and scales to locks, hinges, axes, hammers, and saws (\$28,000,000). Then we may segregate as American specialties, not properly competitive articles, at least \$26,000,000 in sewing and typewriting machines and cash registers. It will not be denied that in almost all of the more highly elaborated manufactures of iron and steel it is American characteristics rather than price considerations which have won our existing trade.

There may be serious and reasonable doubt as to the desirability of attempting to manufacture in the United States many thousands of articles to compete on strictly price basis with products of certain European makers, while the very possibility of much manufacture of this description in this country is more than doubtful. The European War has brought down upon us a deluge of inquiries for many such goods. A goodly proportion of these apparent "opportunities" may be relegated to the waste paper basket with scant if any serious consideration. We may, without jealousy or envy, grant to other nations a continued monopoly of some of their products, and, it is safe to add, without loss to ourselves.

The exceptions are those articles which we can or do make with profit to ourselves, to serve the same purposes, whether or not they are of similar quality, price, or even design. Hard, patient, enthusiastic educational work may be required to introduce some of these goods. That it is possible to do so the whole technical history of the swift advance of the United States as an exporter of manufactured goods goes to prove.

It is certain that a good deal too much stress has been laid on the necessity for American manufacturers to cater to the local requirements of foreign markets. So far as it is practical for us to do so, given the existing organization of our factories, or through slight and not too expensive changes in methods and processes, the adaptation to local preferences or prejudices which has so often been urged may be desirable in many cases,—for example and notably in the development of business in textiles, chiefly cotton piece-goods. However, in principle, we, like every country, may most profitably devote our energies to selling in foreign markets those goods which we manufacture to the best advantage or those specialities in which we excel. Profit and permanency in export markets will be most sure if based on that policy.

It seems probable that entirely too much emphasis has also been placed on the influence upon commerce of ocean freight rates. Without denying the fact that rates are sometimes vital and frequently effective influences on trade, yet the commodities included in such classes are limited in number (contrast relation of freight charges to cost in cement and shoes) and the effect of freight rates may more often than not be offset by other influences. As applying to the great bulk of manufactured goods, that class of exports in which the United States are chiefly interested, ocean freight rates, higher or lower by small margins in a competitive way, seldom if ever finally determine sources from which supplies will be purchased.

Coördination of rail and water routes, the "planning, equipment and administration" of seaboard terminals, are again developments largely dependent upon the live, active, intelligent interests and real personal *work* of American business men. They will have to wake up to the fact that something more, a great deal more, is needed than applauding approval of occasional speeches at lunches and banquets. Active, personal *work* is essential, and that not merely on the seaboard. It is far more necessary and will be the more effective in the interior of the country, very especially in the more distant interior.

These comments end, therefore, very much as they began. Effective merchandising methods are the prime essential in the development of

our export trade. That trade after the war will be precisely what American merchants and manufacturers make it.

RALPH H. HESS: I am in substantial agreement with Professor Johnson upon the general principles of foreign trade policy, but I wish to emphasize the importance of certain nationalistic aspects of impending industrial and trade conditions.

It must be granted, I think, that a rapid extension of foreign trade relations and facilities and a successful reconstruction of the foreign trade policy of the United States along permanently aggressive lines has never been so favorably possible as now. It is even difficult to conceive of a future combination of circumstances so fortunate for the acquisition of international commercial prestige by the United States as that of the present.

We retain the superior richness and diversity of natural resources which have been the source of the spontaneous and irrepressible foreign trade which we have enjoyed to our great profit. We have a great foreign trade despite the lack of a scientifically coördinated system of marketing, transportation, and credit, and in spite of a persistent obstructionist foreign policy. In our economic evolution we seem definitely to have surmounted the period of dependent industrial development and to have attained an efficient maturity of industrial organization and financial independence. We now possess superior advantages over trade rivals in at least two fundamental factors of industry and trade, i.e., *natural resources* and *capital*. In matters of *business acumen* and *industrial organization* we have, in recent years, acknowledged none superior except the mechanism of international intercourse gradually built up by European nations while we were occupied with the development of a complex and lucrative domestic business. This mechanism has been rendered impotent by the advent of war in Europe, and the industrial powers of Europe which fed the machinery of commerce and the agencies of control which resided in London and Berlin are temporarily paralyzed and permanently impaired. The question at issue is not the control of European commerce, but the feasibility of an American substitute for the European trade and developmental machinery formerly in the service of the western hemisphere. It must be confessed that the project smacks strongly of commercial conquest. While it proposes self-help in marketing our own products, it implies the acquisition and holding of South American trade perforce relinquished by European carriers, merchants, and bankers. It obliges occupation and capitalistic development of industrial resources, particularly in South America, preempted by foreign promoters.

Despite the fact that commercial Europe has temporarily abandoned to us attractive trading privileges and industrial opportunities and has handed to us a considerable part of her permanent trade munitions in exchange for volatile war munitions, to retain and develop these opportunities will involve long continued commercial and industrial competition and probably a considerable pecuniary sacrifice for an indefinite time.

Among the factors which I have indicated as favorable to an aggressive American industrial and trading policy, *cheap labor* does not appear. Although opinions differ as to the wage value of European labor after the war, there is no hope that an equivalent of the customary American wage will be approached. Low wage bills will go far toward compensating Europe in industrial and commercial competition against our superiority in capital and natural resources.

In the last analysis, we face the very speculative problem of relative costs and benefits resulting from industrial expansion at home for the supplying of foreign markets, industrial promotion abroad, extension of funding institutions to foreign investment and discount markets, and the acquisition and operation of a merchant marine commensurate with the needs of our ocean trade. I fear that I am not competent to prepare a prospectus of foreign trading possibilities which would enlist the venture of a sufficient private capital and initiative to carry forward such a project. But I think the probable benefits which would flow from such a venture are not confined to those of pecuniary appeal to private capital and individual initiative and, consequently, are not clearly and widely understood by a commercialized public mind. The benefits of foreign intercourse may accrue to individuals directly, or they may accrue to the nation as a whole and to individuals only indirectly and in intangible form. The inference is that the project may be justified on the basis of national economy regardless of direct pecuniary benefits. Political economy and political science occupy common ground in the sphere of international relations. Good international politics is usually good national economy. But, since prudent and farsighted national economy may disregard private and transient interests in the formulation of measures to promote the security and progress of the national society, good foreign policy may not be in harmony with private business interests.

Now, commercial nations have always become powerful nations, not by accident, but because commercial resources and merchandising agencies are, in a secondary way, resources and agencies of military power and diplomatic influence. Merchant vessels, international in-

vestments, and commercial interdependence among nations are mighty agencies making for both prosperous peace and successful war.

Provincial nations are weak nations. The greater are their resources and the sturdier their populations, the more tempting they have been to the commercial and military aggressor. Economically speaking, the United States is provincial.

Incidentally, we at present observe the rapid dissolution of about the only source of European good will which we have ever possessed. For a long time immense foreign investments in the industries of this country have constituted a possible basis of international alliance. But it is calculated that over half of the American securities previously owned abroad have been liquidated in our markets within the last eighteen months, and the end of the war will probably find us without financial interests, friends, or favor among powerful nations, and entirely dependent upon our own naval and diplomatic power to safeguard our progress and to protect our nationality from the war-hungry peoples of Europe and our ambitious and prolific rivals on the Pacific.

International commercial and industrial relations may well be justified in terms of national power and security. An aggressive foreign policy is an essential of defensive nationalism for the United States. Whether it pays in dollars from the outset is a secondary question. If a merchant marine, foreign credit establishments, and effective foreign trading agencies do not promise a net profit from the beginning, an adequacy of private capital cannot be expected voluntarily to venture and persist. Government aid, in the beginning at least, is unavoidable. Such aid will, of course, involve a social cost,—a tax upon the present in behalf of security for the future.

To me, the choice between government aid by subvention and by government ownership of agencies of doubtful pecuniary profitability is not clear. It appears quite possible that equivalent results might be attained by a rational administration of either method. In the matter of a merchant fleet time is a significant consideration, and government purchase or construction affords the probable advantage of speedy accomplishment. Equitable subsidies are not easily calculated in the absence of experience, and if the burden of the unknown risk is to be publicly assumed, as it should be, initial government ownership, subject to conversion after the experimental period is past, seems reasonable and expedient.

R. R. BOWKER: When List developed his system of "National Economies" and raised the cry "from Berlin to Bagdad," to which Herr

Ballin has referred in his recent article in the *Vossische Zeitung*, and when Cobden preached economic "peace on earth, good will to men," they joined a great issue which the present war is fighting out. There are those of us who still hope that the final result may be the full recognition of international interdependence, but it is not improbable that the first effect may be emphasis on national self-sufficiency. In this case and perhaps in any event—for the purchasing power of all the warring nations will be lowered—the expectations of continuing enlargement of our export trade are likely to be disappointed. Respecting South American trade I happen to have some knowledge, for I well remember our increasing trade with those countries when I was a boy, as one uncle was a New York merchant with a branch house in Buenos Aires, and another was the commander of one of the river steamers, even then magnificent, in what was called the River Plate trade, and I have in later years traveled about South America. That trade was pretty nearly destroyed, partly by reason of the protective system and the war tariff increasing the cost of our products and repelling imports. But high costs, whether due to our tariffs or other causes or transportation limitations, however difficult at the moment, are not the sole or perhaps the chief obstacles in our South American trade. While in Rio a few years ago, I was told that only one merchant ship flying the American flag had been seen in that harbor within the year; nevertheless there were and are several good lines between the two Americas, and government-owned ships would not materially affect cargoes. One of the difficulties of our commerce is over-restrictive legislation, such as the Sherman Anti-Trust law in its extreme applications involves. So high an authority as Professor Chandler points out that German manufacturers of drugs and dyes are able to arrange amongst themselves that where there is insufficient demand for any one chemical to justify competition, one manufacturer shall produce this particular article while others refrain from attempting it,—which our anti-trust legislation makes impossible here. But in one element of South American trade, the cost of interest, we shall be at less disadvantage after the war. At one street corner of Buenos Aires a greater supply of capital is represented than at almost any other place in the world, except the financial centers of New York and London, and English and German merchants have found it possible to do business in South America at three per cent interest, giving a year or more credit. This we had been unable to meet, but with the rise of interest in Europe we shall be more nearly on a par, and this should help to increase trade between this country and all Latin-American countries.

BUDGET MAKING AND THE INCREASED COST OF GOVERNMENT

By FREDERICK A. CLEVELAND

Bureau of Municipal Research, New York

The War for American Independence was one of a long line of Anglo-Saxon protests against irresponsible government. It was for the purpose of making our government responsible that our fathers set up a republic. This was a form of government which provided for frequent elections of officers for fixed terms. Belief in the efficacy of the principle of frequent elections for fixed terms is expressed in the constitutional provision that "the United States shall guarantee to every state in the Union a republican form of government." Belief in its efficacy caused Washington to decline a third term as chief executive. Not only have the American people accepted the conclusion that this method of control is well suited to the ends of a great democracy, but they have relied on this principle as a cure for all political ills.

Failure of Our Methods of Popular Control

For 126 years we have labored with this principle of popular control to make it effective. We have broadened the electorate; we have shortened official terms; we have increased the number of officers to be periodically chosen by the people; we have prohibited reelection of executives after the end of a fixed term; we have protected the ballot from corrupt practices; we have worshipped the fetish of "frequent elections for fixed terms" in various forms, only to find that we still have irresponsible government, so insidious and abhorrent to democratic ideals that practices under our republican régime have fairly earned for themselves the opprobrious name of "invisible government."

Examples of the Successful Application of the Electoral Principle

The fact that all our experiments with the electoral principle have been failures, however, should not discourage us. While we have clung to this one use, this one idea, with a blind faith that is quite un-American, others under less favorable circumstances have cast about and found methods for making electoral control over both the personnel and policies of government a marked success. Not one but many democracies have found the means of impressing

the will of a majority on their political agents, for making their governments both responsive and responsible. The easiest way to get a knowledge of the practical workings of methods of control that have been found effective is to go where they are used—to study them where for a period of years they have been in successful operation. This place may be Berne, the capital of Switzerland; it may be London, Paris, Rome, Athens; it may be South Africa or Australasia. Or, wishing not to go so far afield, we may simply cross our northern boundary; here, at our very door, in the provinces, and at Ottawa in the dominion government of Canada, may be found in successful operation the things that we seek. Here we may find visible government, and, as a result, responsive and responsible government, working under social and economic conditions quite similar to our own.

Canadian Experience

Let us go to Toronto, the capital of the province of Ontario. This province is the New York State of Canada. It is by far the most populous and wealthy of our northern neighbors. The country and the people are very like those on this side of the line in Ohio, Pennsylvania, New York, or New England. Let us go to Ontario when the government is holding its annual meeting, when representatives come together to find out what those entrusted with carrying on the business of the people have been doing, and to pass on their plans for another year.

The People in Session by Representatives

What would be heard and seen at one of these annual meetings of the Ontario government may best be told by following through a typical session like that of 1914. The Legislative Assembly of Ontario, as it is called, met February 18. After they had found out who were entitled to seats and the new members had been sworn in, the session was formally opened by a representative of the crown. This takes the place of the speech of the governor in our states. Then followed the organization of the committees and certain other formal things, so that it was not until February 26 that they were ready to take up the real business for which they had come together. The minutes of this day's session contain the following entry:

"On motion by Mr. Lucas, seconded by Mr. Hearst, *Resolved*, That the house tomorrow resolve itself into the committee of sup-

ply, and *Resolved*, That the house tomorrow resolve itself into the committee of ways and means."

Visible Government

This simple entry is full of meaning. It means that in Ontario, in each of the provinces of Canada, in the dominion government, in all other countries where similar methods are used, there is no such thing as "invisible government"; that their method of holding officers to account is to call them before the bar of the house at public session. The motion quoted is the notice given by the chief executive to the representatives of the people: (1) that he is ready to report to them on what has been done and what has been spent during the last year, together with his views on what work and expenditures should be undertaken for the next year, and (2) that he is ready to report to them how past expenditures have been financed and how it is proposed to finance the new appropriations asked for. This motion means that the resolutions, if passed, thereupon become the "order" of each following day; and that when the main business of the Assembly comes up, it will come before the whole house sitting informally as a committee, so that every member may be privileged to ask all the questions of responsible officers of the government that he may care to. At each session when it comes to the "order of the day" the house may resolve itself into a committee of the whole if it cares to take up this business. When in informal session to consider expenditures it calls itself a "committee of supply"; when in session to consider revenues and borrowings it calls itself a "committee of ways and means." These are simply names given to indicate what subject is to be discussed at the meeting.

The Executive at the Bar of Public Opinion

But the significant thing is that the chief executive by making the motion indicates that he is ready to report, and after this notice has been given it is in order for the house to call officers to the bar in committee of the whole house as often as it may wish till the business is disposed of.

Open-handed Fair Dealing

There is another practice not to be lost sight of. After the executive has signified that he is ready to report, opportunity is given at each session, before the "order of the day" is reached, for

members to ask "questions" of heads of departments, to be "answered" on the floor; also in case an officer is not prepared to answer at once, opportunity is given to members to obtain "orders" that the officer shall make "returns" on a future day to the questions that are deferred. On February 27, the day following the proposed resolutions, "questions and answers" and "motions to make returns" began. The whole theory of parliamentary practice there is that every representative of the people must be given a chance to get all the information he desires, so that in case there is any reason for criticising the government, this may be done openly and publicly. But there is another principle of quite as great importance to the country, namely, that an officer shall not be attacked in the legislature without being given an opportunity to explain and defend his action. The criticism must be made when the officer criticised is present. Such a procedure is of advantage both to the people, for the information of the electorate, and to the officer; it brings to the surface all those undercurrents of gossip, those disturbing rumors which, without such procedure, may carry the best of administrations on the rocks. It does away with ill-defined, underhanded methods of attacking officers who, while devoting themselves to the public service, are being assailed by canny persons seeking public office. It means open-handed fair play for the servants of the people and open-handed fair dealing with the public, as well. It means that members of the legislature are to be called to account as well as executive officers. How this method works out appears later.

The Budget and the Budget Speech

On March 2, Mr. Lucas, the treasurer of the province, gave notice that the next day he would make his financial statement. This was done to give everyone a chance to be there. The method of getting the accounts and the estimates before the house was this: Just before the "order of the day" was reached on March 3, the report of the auditor—the "public accounts"—were submitted and referred to the standing committee on public accounts. This placed in the hands of members of the Assembly a printed detailed analysis of expenditures of the last year. Then the "order of the day" for the house to resolve itself into a committee of supply having been read, Mr. Lucas moved "that Mr. Speaker do now leave the chair and that the house resolve itself into a committee of supply."¹ At the same time Mr. Lucas had placed on the desk of

¹ *Proceedings of the Assembly of the Province of Ontario, 1914.*

each member of the legislature a copy of his estimates. In support of his motion "that Mr. Speaker do now leave the chair," the provincial treasurer made what in Ontario is popularly known as the "budget speech."²

The Import of the Budget Speech

The budget speech does two things: it explains and interprets what has been done and what is proposed; it is the opening gun-fire of the party in power to locate the batteries of the Opposition. As a matter of parliamentary practice it is assumed that it is of great advantage in a democracy to have publicity given not only to what the government is doing, but also to locate any smoldering discontent that may manifest itself in a camp hostile to the government. So we find that the one who makes the budget speech steps out on a public platform before all the representatives of the people and the representatives of the press, who are given a place in the assembly hall; and while explaining what has been done and what is proposed, he throws down the gauntlet to all comers or invites attack from any and every quarter. And, to make sure that he may draw the fire of any hidden opposition, he begins by attacking those who have shown themselves to be hostile by taking seats on the opposite side at the meeting.

Methods Used to Develop the "Opposition" to the Administration as a Whole

To make this quite clear let us follow the budget speech of Mr. Lucas. After the few preliminary references, the treasurer introduces his subject by saying:³

² It is to be noted that in the province of Ontario the budget is submitted with the estimates for appropriations, whereas in England the expenditure estimates are submitted at the beginning of the session (December or January) and it is not until April (after the expenditure estimates have been discussed for weeks in the committee of supply) that the "budget" is submitted and the budget speech delivered. The procedure of the house in both cases, however, is practically the same. In each case the expenditure estimates are thoroughly gone over and votes are taken, item by item, on them under the "order of the day" that the house resolve itself into a committee of supply. It is not till the government knows what expenditures are approved by a majority and what are disapproved that the plan of financing is brought in, and then this plan as the "budget" is taken up under the "order of the day" that the house resolve itself into a committee of ways and means.

³ *Financial statement of the Hon. I. B. Lucas, treasurer of the province of Ontario, delivered on the third of March, 1914, in the Legislative Assembly of Ontario, in moving the house into a committee of supply, p. 4.*

Although the estimated revenue that I presented to the house last year was substantially less than the estimated expenditure, I made the prediction then that the actual receipts would prove better than the estimates that I was submitting. I said then you would find the estimate of revenue increased and the estimate of expenditure decreased. The house now, with the schedule of Receipts and Expenditures and the Public Accounts giving all details before them, will be glad to observe that in neither direction have we been disappointed. . . .

The total ordinary receipts for the province for the year closed, as per the schedule in your hands and in the Public Accounts, are \$11,188,302.09, and the total ordinary expenditure \$10,868,026.28, leaving a net surplus of ordinary revenue over ordinary expenditure for the year of \$320,275.81, and a balance of \$2,406,006.20 in cash to our credit in the bank. (Applause.)

I assume that honorable gentlemen opposite who, a year ago, with perfectly serious faces told us that for the year now closed the ordinary expenditure would exceed the ordinary revenue by two to three millions of dollars will be delighted with the actual result. (Laughter.) . . . During recent years there seems to have been necessity for frequent changes in the personnel of financial critics for honorable gentlemen opposite. (Laughter.) A new man is tried out each year. The honorable member from West Northumberland (Mr. S. Clarke) held the post one year only, but he found it was no joke to be financial critic, and besides it soon developed that he had a past political history that was not calculated to qualify him for the position or make him feel comfortable in it, and so he was withdrawn. My honorable friend from Middlesex (Mr. Elliott) was then tried out. He got away to a good start by prophesying that there would be a deficit of \$3,000,000. The actual result showed a small surplus. So bad a guess as that put him out of the running, and he was duly withdrawn. So they go down the line, and my honorable friend from North Bruce (Mr. C. M. Bowman), being the next in the row, is apparently to be tried out this year. But he also has a political history. . . .

Time has shown that all the gloomy forebodings of these various critics were not warranted, and although my honorable friend, the Leader of the Opposition, had due notice that the financial statement would be made this afternoon, he is not in his place, either to criticise or hear such explanations as may seem necessary or desirable in order to make clear the financial operations of the province for the past year. I ask no better evidence that he knows the finances of this province are all right. The Public Accounts show every detail of every transaction. But, Mr. Speaker, I should have liked to have my honorable friend here this afternoon to read to him and to my honorable friend from Middlesex, the critic of last year, the gloomy prophecies then made, the criticism then offered, and compare them with actual results as we now have them. I am sure they would both feel inclined to apologize to Ontario. The best excuse, I fancy the only excuse, my honorable friends opposite can give for these gloomy prophecies—it is the only one that could be offered—is that things are never nearly so bad as they seem—to an Opposition. (Laughter.)

The very evident reason for these remarks was to arouse the Opposition. This is the very evident reason that lies back of nearly one half of the comments made by the provincial treasurer on the schedules presented to the Assembly. He shells the positions of the Opposition to locate their batteries, to get those who had taken

sides against the government to fire off all the ammunition which they have accumulated since the last meeting of the Assembly. To this end much was made of published statements and reported speeches of members of the Opposition to their constituents. Special attention was given to those members who had an interest in newspapers which were hostile to the government. The main thread of the speech, however, was an explanation and interpretation of a carefully prepared summary of revenues and expenditures (actual and estimated) and of a balance sheet which was in the hands of members at the time the speech was made. And these in turn were supported in very great detail not only by the auditor's report, but also by the reports of various heads of departments who had been getting ready for the session for months before the Assembly met.

Testing the Leadership Before Considering the Budget in Detail

It is to be observed that the motion "that Mr. Speaker do now leave the chair" was not put to a vote at once. Time was given the Opposition to muster their forces—to develop their plan of attack and by "question and answer" and "motion and order" to get from the government all the statements and admissions desired before the assault. Finally on the 10th, one week later, the leader of the Opposition led the assault. It was moved and seconded by the Opposition that all the words after "that" of the original motion, which had been made by the provincial treasurer on March 3, be stricken out and the following be substituted:

This house disapproves and protests against (1) the presentation to the house by the Honorable, the Provincial Treasurer, of his financial statement, which does not fairly set forth the character of the financial transactions of the government; (2) the extravagant and wasteful expenditures of public money by the government. . . .

To have carried this amendment would have meant that a majority of the representatives of the people had lost confidence in the personnel charged with the management of public affairs and that, therefore, they did not care to have them submit their plans for the next year; this would have meant also that executive officers would have been forced either to resign or to call a new election on the theory that members of the assembly did not represent public opinion.

After debate on this motion on the next day Mr. Hearst (for the government) moved that all the words of the proposed amendment be cut out and the following be substituted therefor:

This house congratulates the public and the province on the fact that, under the administration of public affairs by the present government, no such system as the spoils system has any place.

He then proceeds further in the proposed amendment to the amendment to announce the policy of the government with respect to civil service. This motion carried. Then the motion made by Mr. Lucas on March 3 that the speaker do now leave the chair was put and carried.

Hearings on the Estimates Before the Whole House

All this was to clear the decks for action, for the consideration of the details of the estimates which were not taken up in committee of the whole house. These were considered in detail, each section being marked off on the margin for a separate vote. The purpose of doing so is to enable the government to have them taken up and discussed in committee of the whole house, in an orderly manner, and to develop any opposition there may be to any item. For example, the first section marked off for separate vote is the details of estimates for the "Lieutenant-General's Office"; the second section is the details of estimates for the "Department of Prime Minister and President of the Council," etc., etc. The estimate which actually came before the committee of the whole house for the "Department of the Prime Minister, etc.," was as follows:

I. CIVIL GOVERNMENT

No. of Vote	No. of Item	SERVICE	Salaries and Expense	
			12 Months Ending Oct. 31, 1915	12 Months Ending Oct. 31, 1916
2		DEPARTMENT OF THE PRIME MINISTER AND PRESIDENT OF THE COUNCIL		
	1	Deputy Minister and Prime Minister's Sec'y	\$2,900.00	\$2,900.00
	2	Clerk	—	900.00
	3	"	825.00	825.00
	4	"	725.00	725.00
	5	Messenger for Executive Council and Care- taker	1,400.00	1,400.00
	6	Contingencies	3,000.00	3,000.00
		<i>Office of the Executive Council</i>		
	7	Clerk of the Executive Council	Transferred	2,900.00
	8	Assistant Clerk of Executive Council	from	200.00
	9	Chief Clerk	Attorney- General's	1,600.00
	10	Clerk		900.00
	11	Contingencies	Department	300.00
			\$6,850.00	\$16,650.00

Developing the "Opposition" in Detail

From this it will be seen that it is proposed to add one more clerk to the "secretary's office"; and to add by way of transfer four additional clerks to the office of "executive council." It is submitted in this form in order that the estimate may be placed before the house item by item; in order that the executive whose estimate is being discussed may be there in person to explain and answer all questions; in order that the government may have recorded an informal vote in committee of the whole house which will not only bring out the Opposition but also bring out the case of the government and put each member on record. This is done with the press and with the public present. This is publicity. This is visible government. This is also responsible government, for every member of the cabinet must come there prepared to defend each item in the estimates. No matter what differences of opinion may have developed in the cabinet during the course of preliminary discussion of estimates; no matter how much the initial estimates of a particular department or of a particular member of the cabinet may have been cut by the cabinet as a whole; no matter what differences of opinion may have developed, before the estimates were submitted, on matters of policy, after decision has been reached as to the form of estimates, each member of the government must accept this decision and come before the Assembly prepared to vote as one man. In case any member does not accept the principle of solidarity of executive responsibility, as expressed in the estimates, he must resign beforehand. The cabinet must be as a man in its leadership, and that man the prime minister, through whom both accountability and responsibility are to be enforced.

The Conclusion Reached

Debates were continued under the "order of the day" in committee of supply until April 24, when a resolution was passed in form as follows:

Resolved, That a sum not exceeding \$———— be granted . . . to defray the expenses of ————— for the year ending —————.

This ended the deliberations of the house in the committee of supply. Immediately following and under "order of the day" the house resolved itself into the committee of ways and means and passed this resolution:

Resolved, That there be granted out of the consolidated revenue fund of the province a sum not exceeding \$———— to meet the supply to that extent granted. . . .

Passing the Act of Appropriation

The speaker then resumed the chair and Mr. Ferguson reported that the committee had come to a resolution. The resolution was ordered received forthwith and, continuing, the record recites:

The following bill was introduced and read for the first time (Bill No. 199) entitled: An act for Granting . . . Certain Sums of Money to Defray the Expenses of Civil Government for the Year Ending 31 October, 1914 (deficiency), and for the Year Ending 31 October, 1915 (Regular Appropriation), and for other purposes therein mentioned. Ordered read a second time forthwith. Bill read a third time and passed.

Comparison With Our Own Involved Practices

This brief description will give an idea of the simplicity, the directness, the publicity with which the main business that came before the Assembly of the province of Ontario for the year 1914 was despatched. It is also generally descriptive of the procedure used at each session not only in the province of Ontario, but also in every other province of Canada. It is generally descriptive of the simplicity of procedure used in handling the business of the dominion parliament at Ottawa. It is characteristic of the simplicity of procedure used in the British Parliament, the French Chamber of Deputies, and in every other country where visible, responsible, and responsive government is in practical operation. Compare this procedure with the involved, the occult, the invisible methods that have been worked out in our federal government and at each of our state capitals. Compare the direct dealings of representatives with members of the administration under the one system and the underhanded, indirect, log-rolling, pork-barrel dealings of representatives with members of the administration and with each other under the other. Compare the results in effectiveness for enforcing accountability, for developing leadership on the one hand, with the lack of accountability and lack of leadership on the other. Can there be any doubt as to which method is preferable?

The Utilization of the Press for Purposes of Publicity

In the province of Ontario no provision is made for having long-winded speeches printed and circulated by members among their constituents. Everything is as open and direct, as straightforward

ward and businesslike as a meeting of a board of directors of an ordinary business corporation. What is said is held to the point of the business in hand. There is not even a minute kept of the speeches. The record only shows the action taken or the result achieved. The theory of this practice is that if members are given leave to print or a record is kept of the speeches of those who are there to look after the interests of the commonwealth, this will put a premium on "oratory" as distinguished from "business"; that a large part of the time of the Assembly will be wasted by "wind-jammers" who are trying to make a record to send back home instead of giving attention to the affair in hand. Ample opportunity is given, however, for publicity by having the business in hand publicly discussed with the representatives of the press in attendance.

What Makes Front-Page News

A matter which is being discussed between members of a standing committee and behind closed doors, as is the practice in our legislatures, seldom has any news value; if any opportunity is given for public attendance the discussion is largely academic, and academic discussion is not front-page news. In these committee discussions or inquiries no one assumes responsibility for a definite proposal until the committee reports, and then it is the report of a bipartisan, star-chamber proceeding. The bill is presented, not as an administrative measure, but as the proposal of its chairman who has no responsibility for administrative results. His committee may be one of a large number of committees reporting bills for appropriations on different subjects. They are usually reported toward the last end of the session with a voluminous record of hearings that no one has time to read. A large part of what has happened in the committee room never gets into the record. Seldom has a member of the legislature opportunity even to read the bill. When it is presented it comes up as a part of a program of the party in power, is jammed through by gag-rule, and becomes law before even the legislature itself knows what has happened. Then the country looks to the executive to protect it against legislation and acts of appropriation that are positively vicious.

Contrast of the American and Foreign Press

Not only does the procedure worked out in our federal and state governments suffer by comparison, but so also do our various news

agencies. The events that make news are those which have human interest. There are two things that always make news: one is a fight; the other is a scandal. A dog fight on the street may make news if each dog has a responsible backer. The events of a cockpit make news. Unimportant nobodies become news when they go into a public ring. The more important the parties contestant, the more important the news. When the head of a great government takes a position on a public platform before the chosen representatives of the people and issues a challenge to one and all to come and attack him, any issue joined becomes news that may travel on wires around the world and the next day be before every reader at his breakfast table. This is political news that cannot be kept out of the daily press. Given a parliamentary procedure, such as has been described, which is adapted to bring out everything that is scandalous and derogatory to persons of high positions and to make accusations the subject of "trial by battle," we need not be at a loss to understand why it is that "visible" government develops a press which prints political news.

Budget-Making and Increased Cost of Government

Let us approach the subject of budget-making as a cure for "invisible" government from another angle, that of increasing cost. Increasing cost is the necessary accompaniment of our constantly increasing public service. Expenditures have increased in countries where budgets are used as well as in countries where budgets are not used; but a budget procedure means careful executive planning and independent legislative review and criticism. A budget means careful executive spending; it means strict accountability; it means publicity; it means administrative preparedness. The budget is a device for requiring the executive to assume responsibility for leadership. Lack of responsible leadership and lack of administrative planning means waste of public resources.

Continuity of Policy

Provision for open-handed fair dealing and publicity, with provision for the prompt retirement of officers who do not retain the support of a majority, makes for continuity of policy and stability of political purpose. Lack of open-handed fair dealing and lack of publicity, without provision for prompt retirement of officers who do not retain the confidence of the people and their representatives, makes for lack of continuity of policy and instability of political purpose.

By way of contrast, let us again return to the province of Ontario. Although provision is made for keeping the Opposition constantly on the alert, and every opportunity is given for well-informed criticism, the fact that the administration is placed on trial at every meeting of the Assembly and may be retired at a moment's notice by a vote of lack of confidence has not made either for lack of continuity or for instability. The present administration has been in office eleven years; the administration immediately preceding this one was retained in office more than thirty years.

Lack of Confidence Here Goes to Our Institutions

Compare this with what has happened in New York State or Pennsylvania or Ohio, in fact in all of the American cities or the national government. By reason of the lack of opportunity given for public opinion to assert itself, it has become the habit of mind at each election day to turn out the administration, simply as a means of registering a public protest against our system of invisible government. Furthermore, not a year passes but that some action is taken in one state or another to limit the powers of the executive on the one hand or the powers of the legislature on the other. Our constitutions are largely made up of statements of what the government cannot do or undertake. Instead of being documents of power with provisions made for enforcing accountability and responsibility for its use, they are documents of limitations—of inhibition of power. They are built on lack of confidence on the part of the people in our whole political system.

The Question of Waste of Public Resources

While increase in public service carries with it increased expenditures, it is not necessary that the business shall be transacted in such a manner that public resources shall be wasted. Without responsible leadership waste is inevitable. During the whole period of our national existence there has been waste and extravagance in the management of public affairs. From all the facts on hand it is apparent that the percentage of waste today is not as high as it was fifty years ago, but it is very much larger in amount. Reference to Senator Aldrich's sensational declaration that if he could run the national government as a private business he could save \$300,000,000 a year has become hackneyed. This is to be said, however, that those who have made light of the observation have not attempted to do more than prove that it is excessive. All

admit that the waste of national resources runs into many millions, which otherwise might be used to promote the welfare of the people. All admit that these millions are worse than wasted because they are used to subvert and defeat the purposes of democracy.

Waste in the Federal Government

During the two years of the existence of President Taft's Economy Commission a number of federal services were gone into. In the offices at Washington, where careful detailed studies were made, it was thought by the commission that the average waste was not far from thirty per cent. Only a small part of this, however, could be traced to what might be called "individual inefficiency." To stop this waste and make it available for increased public service would require a thorough overhauling, which must begin with Congress and go through the personnel of administration to methods and processes of business that have been handed down from time immemorial.

For example, the adjutant general's office of the War Department was run at an annual salary of \$781,000. It was thought that by changing the methods in use the work might be done much more efficiently at an annual cost of \$480,000. The office force was found to be widely scattered and the personnel of the different units of organization so located that their work could not be done to advantage. As an illustration of defective method it was shown that the working subdivisions were so arranged that a constant interchange of communication between these subdivisions through the medium of an elaborate messenger service was necessary.

The Results of Irresponsible Government

Again as illustrating the laborious methods used, the course taken by the average piece of correspondence, due to bad organization and obsolete methods, necessitated forty operations in the mail and record division, besides thirty-nine operations in those divisions which have to take administrative action in the case, a total of seventy-nine operations in connection with the handling of the average piece of incoming correspondence from the time it is received in the office until the reply is prepared. Substantially all letters received in the office were briefed on the back of the first fold and the purport of each written on index and record cards, on which work of briefing nearly sixty clerks were engaged all of the time. In respect to outgoing correspondence this card recording was car-

ried to a much greater extent. A verbatim card record of every communication was prepared, at an expense of course very much greater than that sustained in regard to incoming correspondence. Under this practice practically all letters and indorsements were written twice; the first copy written on the record card, frequently by hand, constituting the record of outgoing correspondence, and the second the final draft of the letter in form for transmission to the addressee. These same handicaps to efficient and economical administration existed in each of the divisions and subdivisions, a consolidation of which would have greatly simplified the work.

As showing a wasteful use of valuable office space, it was found that seventy-six good office rooms in the state, war, and navy buildings were used for the storing of old and infrequently-used records, while the personnel engaged on current business had been forced to occupy quarters scattered in about six different buildings in different parts of the city.

Disregard for the Personnel Who Do the Work

In many instances the working force was rendered inefficient by badly lighted, badly ventilated, and insanitary quarters,—one building being so unsafe as to be a constant menace to life, having been condemned both by the health and building authorities of the District of Columbia. The following description of one of the suites of rooms used is taken from the health inspector's report:

This is used as a file room and eight men are employed in it. In the toilet room adjoining, five men are employed on printing presses. This room is provided with three windows and one door, but is very dark and contains the following fixtures: three water-closets, automatically flushed; four wash-bowls with combined trap, and one slop sink. The floor around the closet bowl is covered with sheet iron, which at the time of inspection was in a foul condition. The entire floor is continuously lighted during working hours by artificial light.

Disregard for the health and working efficiency of employees under our system of irresponsible government is also shown by the results of analyses of seventeen samples of water collected from "coolers" and waste cans sent to the bureau of chemistry. From their reports it was found that in eight of the seventeen tests *bacilli coli* were found—in other words, the germs that find their origin in the human intestinal tract—and that in some instances it was more safe to drink out of the waste cans than it was to take water from the coolers.

The waste and inefficiency discovered were seldom attributable

to any particular person. They were the results of an inheritance of bad methods. An elaborate system of records and office practices had grown up under conditions of civil service that utterly broke down in time of war; in fact it could be operated only when the War Department was on a peace footing. After the Spanish War it took three years to straighten out the red tape that had become entangled when the system was really put to a test.

Waste Due to Log Rolling

In the field, that is away from Washington, it was thought by the commission that the waste was still larger. There are few well-informed persons who will doubt that not less than fifty per cent of the hundreds of millions of dollars that have been appropriated for rivers and harbors has been wasted. Due to what are known as log-rolling and pork-barrel methods, the losses from bad location and lack of planning, naval expenditures and war expenditures have been large. Navy yards are located at points where large vessels cannot enter, army posts are scattered all over the country at points which make them of little use for purposes either of training or for carrying on the movements of the army.

Political Influence Under Conditions of Irresponsible Leadership

In 1913 a detailed study was made of the expenditures at the port of New York, under Mr. John Purroy Mitchell as collector, and the conclusion was reached there that the waste was thirty-five per cent. By some it was thought that this condition is peculiar to large spending units. A large number of small local governmental agencies, such as counties, townships, towns, and cities have been studied by the Bureau of Municipal Research during the last ten years. In many of the smaller governmental units a still larger percentage of waste has been found than in the centers of large population. In a few instances the waste has amounted to nearly one hundred per cent. That is, the public got practically nothing out of its contributions to support the government; almost the whole amount went into the pockets of favorites as patronage or was aimlessly frittered away.

For the first time we are beginning to find the limits of our economic resources. Until the present time our resources were so abundant that the rising cost of public enterprise, of unpardonable waste and extravagance, has drawn slight attention to the need for economy or to the need for careful planning. When our

limitations were felt those who pointed to waste and urged economy were the first to receive attention. But as the business of government was studied by those interested in economy and the need for increasing expenditures in any event, even after economies were introduced, became apparent, then thought began to turn to management, to the need for planning, to providing a means for intelligent consideration of work to be done, of organization for doing work, of methods and results, to an essential defect in the old order of things,—the lack of a definite program of work, the lack of a definite forecast both of estimated expenditures and of ways and means for raising funds to make ends meet.

The Beginning of Consideration of Budget Making

This attitude of mind marked the beginning of an era of propaganda for a budget procedure in the United States. It began with the cities where the demand for economy was first felt, and it began with a scrutiny of estimates for expenditures. In fact, many cities now call their estimates of expenditures and appropriations their budgets. So in discussing expenditures of national and state governments both writers and officers use the term "budget" as designating a request or authority to spend. When, however, the necessity for better management and the idea of planning public business began to take hold, with it came a demand for responsible leadership and for the means of enforcing responsibility. Then for the first time we began to appreciate the significance of the procedure worked out in England and continental Europe, which gave to representatives of the people the ability to hold executives to account by requiring them each year to submit a carefully prepared financial plan.

Increasing Expenditures Make an Effective Budget Procedure a Political and Economical Necessity

The political necessity for the adoption of a budget procedure lies in the fact that it is the only effective means which has ever been devised for enforcing accountability and responsibility on an executive who has sufficient power to make him a leader, i.e., to make him effective in the preparation and submission of plans proposed for adoption and to enable him efficiently and economically to execute them after they have been approved and financed. The economic necessity for the adoption of a budget procedure lies in the fact that demands for service by the government are going to continue

to increase and with this the necessity both for careful, intelligent planning by the management and a strict censorship on the part of those who pay the bills.

And the public is beginning to take a new, a more intelligent, view of who pays for extravagance and waste. Before we began to feel our economic limitations it was thought that the taxpayer was the one who suffered; we were deluded ourselves with the notion that this taxpayer was some foreigner who was glad to pay the cost of running our government. This view is rapidly disappearing, as we begin to look the facts in the face. Our indirect taxes no longer suffice; when we begin to look for increased revenues from direct taxation, we are constantly confronted with the possibility of killing the goose that lays the golden egg. There is nothing more firmly fixed in our political sense than the notion that industries are made and ruined by different rates of taxation levied on one or another in a competitive market. Depression in industry hits not alone the taxpayer, but the laborer, the consumer, the whole community.

From the theory, therefore, that we little care about the cost of government, we have come to measure results and say that the government must be held to strict account for expenditures, that every dollar squandered or wasted means that some one who can least afford it is being deprived of a community service to which he is entitled, that the poor man is being robbed by the grafter and the incompetent official and not the rich, that waste in government is a levy on the poor.

Essentials of An Effective Budget System

In considering the essentials of a budget system or method of finance, it is at all times to be remembered that it has been devised and used as a means of effectively exercising popular control over the executive. But it is also to be held in mind that it is a method adapted to the effective exercise of control over an executive who is looked to as a leader, and a leader is required to take the initiative in planning the work and finances of the government as well as in the execution of plans. A budget procedure has never been used and is not adapted to use in a government in which leadership, i.e., initiative, is taken away from the executive, and in which the legislature is both the proposing and the disposing agent, relegating to the executive the negative function of a veto.

Perhaps this paper should not be closed without a categorical

statement of what are conceived to be the essentials of an effective budget system. Briefly they are:

1. An executive who is responsible to the people for leadership in making, submitting, and explaining a public service and finance plan or program for the government, but who has no power to execute the plan until it is approved by a majority of a representative body.

2. A body of representatives who are responsible to the people for inquiring into what has been done with funds already granted, and critically reviewing plans for service submitted as well as methods of financing, and who will withhold their approval to an appropriation or revenue measure before them until it is amended and presented in such form as to gain the support of a majority.

3. The adoption of a procedure requiring that the executive meet with the representative body and present and explain his accounts, his estimates, and his proposals to them early in the session in committee of the whole, so that every opportunity may be given for an intelligent opposition to develop, and for the further purpose of enabling the administration to publicly meet the opposition before any one is required to assume responsibility for final action.

4. Provision whereby any important issue may be settled either between the executive and a majority of the representatives of the people, or, in case this is not possible, by having the issue referred directly to the people at an election to determine which of the partisans to the controversy will be retained in the public service, the essential purpose of such action being to make the government responsive to the will of a majority, and to put the administration into the hands of persons who are in sympathy with the policy adopted.

What Steps are Necessary to the Adoption of an Effective Budget Procedure in this Country

The question is asked, What steps are conceived to be necessary to the adoption of an effective budget procedure in our federal and state governments? In theory, it may be conceived that all these steps may be taken without constitutional amendment; that is, the legislature might require the executive to take the initiative in the preparation and submission of estimates and financial proposals; the legislature might provide for their consideration in a committee of the whole house or joint committee of both houses where two

houses exist; the legislature might withhold its consent to an appropriation or revenue measure till it is amended by the executive in a manner to gain the support of a majority; and the legislature might provide for reference to the people in case of a deadlock.

As a practical matter, however, it is doubtful if any of these things, except possibly the first, would be done.

If an executive might assume that he has a right to prepare and submit a budget, as did President Taft and as Governor Whitman does now, the legislature, following its customary practice, would in all probability refer it to a standing committee where it would be lost sight of forever, or, if it appeared at all, it would come to light toward the end of a session so far disfigured by legislative patches and shears that it could not be recognized. In that event, every good that could come from a budget would be lost. The legislature might pass a law requiring the executive to prepare and submit a budget, as in Ohio, in which event the measure would be relieved from initial hostility such as was expressed in Section 6 of the federal sundry civil appropriation bill of August 24, 1912, aimed to prevent such an attempt on the part of the executive. But the result would be little better, for it would not mark out a new practice, which would require the executive to take the part of a responsible leader, nor would it take the steps to prevent log-rolling among members, nor would it provide the means whereby the executive on his motion or the legislature by joint resolution might refer an issue to the people.

Furthermore, to be effective as a measure for enforcing responsibility and making the government responsive, it must reach to the people, it must provide the means whereby the executive may know what the opposition is, measure it, assume responsibility for leadership so that he will stand or fall on the action taken, and with all this he must be able to get a question of policy before the electorate when a majority of the representative body is against him. Correspondingly, the legislative body should have the same right of appeal to the electorate in case of what they consider an arbitrary veto or other action which causes a majority of them to lose confidence in the executive. These working relations can be effectually established only by a constitutional amendment.

Given, however, a constitutional amendment requiring the executive to submit a budget, and the legislature to meet with the executive as a committee of the whole to receive and consider it; given also an equal right on the part of the executive and the legis-

lature to call a new election at which any irreconcilable issue may be submitted, a majority vote thereby deciding both who shall be the executive and who shall represent them in the legislature, all other things would be added as a matter of current working adjustment.

Such a constitutional amendment might be initiated by the legislative body. But in all probability it will not until a campaign of education has been carried on which will force it as an overwhelming demand of the people.

This thought may be left in closing, namely, that until some such provision for making the "electorate" and the "representative body" effective instruments of control over the executive, the people will not sanction an increase in executive power sufficient to make him a responsible leader. They would prefer to continue to suffer from the results of inefficiency, log-rolling, pork barrel and all, rather than tie themselves up to an executive for a fixed term who could not be called sharply to account. The recent experience in New York may be pointed to as confirming this view. But if this be thought to be a too recent or too narrow experience, it is confirmed by a thousand years of Anglo-Saxon experience.

BUDGET MAKING—DISCUSSION

JOHN A. FAIRLIE: Dr. Cleveland's interesting account of some of the external formalities of budget procedure in the Ontario parliament may easily give a misleading impression as to important and fundamental facts about budget methods in Canada and Great Britain. The Canadian and British budget systems are by no means identical with the plan proposed for this country. The proposed plan, too, while, perhaps necessarily, vague and indefinite in some respects, involves much more radical and revolutionary changes in American political organization than may appear on the surface.

It may be assumed that the Ontario procedure is referred to as an example of an executive budget, submitted to a legislative body, subject to the possibility of an election to determine a conflict between the executive and legislative. The Ontario budget is prepared under the direction of a cabinet of ministers holding offices comparable in some respects to executive offices in this country. But these ministers are also members of the legislative body and the political leaders of the majority in the legislature. The budget is thus, in fact, prepared, not by a strictly executive body, but by the coöperative action of the permanent executive officials and what is practically a committee of the most influential members of the legislature. This situation is also true in the other Canadian provinces, in the Dominion government, in all other British self-governing colonies, and in the government of the United Kingdom itself.

The proposal for the preparation of the budget by the executive without the active coöperation of the leading members of the legislature is not in accordance with the methods of British government, or of any parliamentary or cabinet government. It is more nearly analogous to the methods employed in Germany, where the executive is independent of the legislature, and the legislature has relatively little influence in the government.

Further, the possibility of a dissolution of the legislature in Ontario, or any British government, on the regular financial budget is at most a traditional convention, which has had no vital force for many decades. Dr. Cleveland himself noted that there has been no party change in the government of Ontario for nearly fifty years. So that the challenge of the provincial treasurer to the Opposition was mere *brutem fulmen*,—"a play to the galleries." In Great Britain, it may be questioned whether a dissolution has ever taken place on the budget alone. Indeed, since 1867, a dissolution on any question on account of a vote in

the House of Commons adverse to the cabinet has become a rare and unusual phenomenon. Just because the cabinet which submits the budget is composed of the leaders of the majority party it can rely on the substantial acceptance of the budget by its own political supporters.

In the recent instance when a parliamentary election was held because the House of Lords had declined to pass the budget of 1909, the issue was at once enlarged beyond the question of the passage of that budget to the constitutional question whether the House of Lords should continue to have power to prevent the passage of the budget. And the result was the enactment of a law definitely depriving the House of Lords of any such power.

It may safely be said that the passage of a comprehensive financial budget cannot, in modern governments, be ordinarily subject to the possibility of defeat or serious delay. The work of the government must be continued; and no budget system based on a popular election as anything more than an extraordinary measure in an extreme emergency is likely to operate successfully.

If the plan proposed were enacted into law in this country, it would suffer the disadvantage of trying to introduce by formal statute an erroneous conception of a system that has developed by tradition and custom. But if the proposal is to be seriously considered certain problems must be faced and definitely answered.

If considered with reference to our state governments, the question must be decided whether, in case of conflict between the governor and legislature, the decision is to be made by the dissolution of the legislature, by a recall of the governor, or by a direct referendum on alternative budgets. If the first of these methods is used, the result is more than likely to confirm the action of the legislature; and the executive budget will thereafter be ignored. If on a referendum or a recall of the governor, and the governor's budget is approved, the legislature will soon be reduced to an agency for ratifying the governor's proposals,—as has been the result in cities where the executive budget has been introduced. If this latter change in the American system of government is intended, it should be clearly understood beforehand, and not be brought about as an incidental result of a new budget system.

In the national government, the problem is more complicated. The Senate may refuse to pass a budget submitted by the President and approved by the House of Representatives. Will the decision then be made to depend on a dissolution and new election of the Senate, or of the House of Representatives, or on a recall of the President (decided by electoral votes) or on a direct referendum of all the voters in

the United States? Whichever method is adopted will vitally determine what is to be the dominant factor in the American national government. It means in any case radical changes in the relative influence and importance of the President, the Senate, and the House of Representatives,—not only in financial matters, but indirectly in the whole field of national legislation. Such changes should have a good deal of discussion from other points of view than that of the budget before the project is actively pressed.

It is clear, however, that the constitutional changes needed to introduce the proposed plan, at least in the national government, will not be adopted for a considerable period. The more pressing problem would therefore seem to be what improvements in budget methods can be made under our present constitutional system.

In the first place, the objections to the plan proposed are not meant to indicate opposition to increased executive participation in the preparation of the budget. The chief executive—or even better, the principal financial officer—should take an active part in revising estimates and preparing a comprehensive financial plan for each fiscal period. If possible this should be done in coöperation with the leaders of financial policy in the legislative body. There is a precedent for this in the early history of the present national government, when Madison, the recognized leader in the House of Representatives, met with President Washington and the chief executive officers. It does not appear impossible that any president on his own initiative could revive and develop this early practice, and apply it to the formulation of a financial budget.

Further, there should be important changes in legislative organization and procedure. There should be one central committee on finance, preferably one joint committee for both houses. Such a committee could coöperate with the executive in preparing the budget; or if this is not at once possible, it should consider the budget submitted by the executive, and report its proposed changes to the legislature in time to permit open discussion before final action is taken.

Further changes that can be made are included in the program proposed by Dr. Cleveland. The budget should be presented to the legislative body as a comprehensive plan, and should be given adequate discussion in committee of the whole. The chief executive officers should be allowed and expected to appear before the committee of the whole, and take part in the discussion. These proceedings would receive attention in the press, and publicity would thus be given to the alternative proposals.

Such changes can be introduced by action of the executive and

changes in the rules of the legislative bodies, without involving a radical reconstruction of the national or state constitutions. In the states, there is further need for a reorganization of the administrative authorities, most of which can be done by statute. The result would not be the British or Canadian system, nor the German system; but an adaptation of some of the best features of the methods of other countries to the American system of government. It would tend to concentrate responsibility, without completely centralizing the powers of government either in the executive or the legislature.

S. GALE LOWRIE: To the Sixty-fourth Congress, which has just convened, there have been presented estimates of needed funds \$170,000,000 in excess of the appropriations of last year. The demand for increased revenues has been constant. Whether we are advocates of increased armament and a more adequate system of defense, or whether we believe in more extensive internal improvements and a broader program of social legislation, the functions of our governmental services are, nevertheless, constantly making new drains on our public exchequer. Opposition to the imposition of taxes to meet these ever increasing burdens lies largely in the belief that the government is not employing the economy in the use of the public funds or the efficiency in the conduct of the public business which the country has a right to demand. The cost of our national government reached last year the enormous sum of \$1,115,000,000. Certainly it is only reasonable to require those charged with raising and disbursing this vast sum to employ the most careful planning, so that in the use of these funds the various services of the state may be assured support in accordance with their respective needs and that revenues may be available to meet the requirements of this program without imposing unnecessary financial burdens upon the people. We are justified in demanding what we have never as yet received, the most thoughtful estimating with respect to the preparation of the budget, the passage of the revenue and appropriation laws, and their execution; or, in other words, the use of scientific budgetary methods.

The formulation of the budget plan involves a most careful survey of the needs of the government for the next fiscal year. Those who prepare it must have in mind a program of what the administration proposes to do. It must be more than a list of departmental estimates—the entire purview of the state's activity must be contemplated, and a plan of work for the government determined upon. This is the first essential in any adequate budget system, but it has never been followed

in our national government or in any of our states. It is now the practice in the preparation of both national and state appropriation bills to consult administrative departments as to their needs, but no plan for the state as a whole is prepared. As Professor Ford says, the officer commissioned to submit these requests may be likened to a funnel through which departmental requests are poured upon the legislative body.¹ But these requests are inadequate; they must be correlated. We must have attention focused on the needs of the whole government as a unit, and in framing such a program departmental estimates may need adjustment.

In the conduct of our national government we have never appreciated the need of making our revenue plans fit our plans for expenditure, but we have oscillated between the extremes of inflated or depleted treasuries. The degree of this fluctuation is generally a fair test of the foresight with which the budget has been prepared. In England during normal times the variation between revenues received and appropriations authorized has usually been less than two per cent. In the history of government no satisfactory budget plan has been evolved where there is not presented periodically to the appropriating body a complete plan which cares for the services of the entire state and which also embodies a revenue program adequate for these needs.

But the chief cause of extravagance in our federal system of appropriations does not lie in the lack of an executive budget, costly as this may be, but in the fact that the consideration Congress gives the appropriations is so divided among committees that no adequate conception can be formed of the needs of the state in their entirety. In the lower house alone, not only are revenue measures divorced from the consideration given appropriation bills, but the appropriations themselves are divided among nine separate committees. In the Senate a similar condition prevails. No adequate conception of the fiscal program can be secured in this way. Even the division between the houses is inimical to a proper appreciation of the entire fiscal program. The most important step that can be taken to secure a proper point of view with respect to financial measures is the formation of a single joint finance committee of the two houses of Congress, through which committee alone revenue and appropriation measures will be considered and a proper coördination maintained. This plan has been adopted in a number of our states and the results have been salutary. Only in some such way can an intelligent approval be stamped on the

¹ H. J. Ford, *The Cost of Our National Government*, p. 12.

administrative program for expenditures and the proposals for raising revenue.

Scientific budget making, then, means scientific planning: the preparation and submission by the executive of a program for the conduct of the whole of the governmental services, including an estimate of the expense involved in their maintenance and a proposal for revenues to meet these expenses without the imposition of unnecessary taxation. It involves the approval of this program by the legislative body, and, to give this approval properly, there must be centered in a single committee the duty of considering it in its entirety both with respect to the authorization of appropriations and the means of raising revenues.

In seeking for examples of budgetary systems which have proven their worth we turn to governments organized after the parliamentary system, such as England, or to our cities, where alone in this country budget methods worthy of the name have been installed. But in attempting to adapt these practices for use in our state or federal governments care must be exercised lest we unknowingly install features suited only to governments with responsible ministries or where the legislative bodies are unicameral in form and are in constant touch with active constituencies,—as is generally the case in our municipalities. A most common error lies in attempting in governments organized upon the federal plan and with bicameral legislatures to support the permanent services of the state on a year-to-year basis. The danger of a curtailment of the government's functions by a slight majority of a single house, in spite of the wishes of the executive or of a majority of the legislative branch, is ever present under such a plan, and results in a control over the activities of the executive departments by what may be a legislative majority, which is inimical to good government. It also forces each governmental service to map out its work on an annual basis, even though its projects may require years to develop. Such a method is wasteful in its lack of perspective, as is the appropriation system which follows no well-matured program.

Our government has year after year postponed fiscal reforms which all close students of our political institutions have declared imperative. Twenty-seven years ago, Bryce in comparing our government with those of the old world wrote:

Every European state has to fear not only the rivalry but aggression of its neighbors. Even Britain . . . must maintain her system of government in full efficiency for war as well as for peace, and cannot afford to let her armaments decline, her finances become disordered, the vigour of her executive authority be impaired, sources of internal discord continue to prey upon

her vitals. But America lives in a world of her own. . . . Safe from attack, safe even from menace, she hears from afar the warring cries of European races and faiths, as the gods of Epicurus listened to the murmurs of the unhappy earth spread out beneath their golden dwellings. . . . This is why the Americans submit . . . to the defects of their government. . . . For the present at least—it may not always be so—she sails upon a summer sea.²

The time for action has now come. World events have forced upon our government the necessity of undertakings with which our appropriating system is totally unable to cope. It is imperative that we disregard the haphazard methods we have followed hitherto and install a budget plan adapted to our governmental machinery. Whether such a change leads us from our federal form toward the parliamentary one with its responsible ministry, as fiscal reforms in England from Magna Charta to the Lloyd-George budget have introduced the successive developments to the parliamentary system of our day, need not alarm us. The truest progress in government has been through the incorporation from time to time of expedients for curing particular evils rather than in the adoption of a large scheme as a conscious experiment.³ The expedient most needed today is a device which will permit careful planning in the raising and expenditure of the public funds. This is the function of the public budget.

F. A. CLEVELAND: Professor Fairlie begins his discussion with the following statement: "It may be assumed that the Ontario budget procedure is referred to as an example of an executive budget, submitted to a legislative body, subject to the possibility of an *election* to determine a conflict between the executive and legislative." This is a fair statement of a fundamental principle of budget procedure. The thought that underlies our constitutions, both state and national, is that the affairs of the people should be both well managed and managed in accordance with the will of a majority. To ensure these results, the personnel of management has been divided into three groups, namely: *executive officers*, to carry on the business authorized; *representatives*, who will meet from time to time in behalf of the people to review the acts and plans of executive officers; and an *electorate*, which is the final arbiter of all disputes over matters of public policy.

Representatives have no properties, no personnel, in their hands with which to carry on the business for which the government is organized. Being wholly without human or material resources, the device which has been adopted for enabling the representative body to impress its

² Bryce, *American Commonwealth* (1913), Vol. I, p. 309.

³ *Ibid.*, p. 305n.

will on those who have the machinery of government at their command is to place the determination both of what shall be done and of what funds shall be provided for carrying on the functions of government in their hands,—that is, to give to the representative body control over the purse. The purpose of a budget is to provide a means whereby representatives may force an accounting for past acts and have laid before them plans for future action before further funds are granted to executive officers with which to carry on the business.

The success of a budget practice therefore depends on three things: (1) *an accounting* for past action and the preparation of a *plan* for future action, by executive officers; (2) *critical review and discussion* of the accounts and plans of the executive, by those who meet as a representative body; (3) *a procedure* which will give publicity to what has been done and what is proposed; which will provide for open criticism, both of acts and proposals of the executive; which will also provide for determining whether a majority of representatives, and in last analysis a majority of the people, are in favor of giving further support to those who are in office.

This is the very essence of the representative system; accountability and planning, independent review and criticism, publicity and provision for ascertaining the will of a majority. And the principles underlying this practice are sound. The people can have no notion of the acts of representatives or of public officers without full publicity; representatives can neither intelligently prepare work plans for the government nor would they be qualified to sit in critical review of past acts and proposals if they do prepare such plans; executive officers are not in a position to explain or defend measures which they do not originate. These principles are common-sense conclusions that are exemplified in all representative undertakings that have been successful, whether public or private. In every case where those who conduct the business have not been required to lay before their board or representative body a record of past performances and a plan for future action, both the representative body and the electorate have floundered helplessly about and their action has been both unintelligent and disappointing. Such a requirement is necessary to the effective functioning of the critical and policy-determining personnel of management.

After stating what he assumes to be the major premise of my argument—which is accepted—Professor Fairlie makes three assertions about the Ontario analogy which presumably are intended to discredit it as a precedent to be followed even in its main provisions. These three assertions are as follows: (1) "The Ontario budget is prepared under

the direction of a cabinet of ministers holding offices comparable in some respects to executive offices in this country." (2) These ministers are also members of the legislative body." (3) The ministers are "the political leaders of the majority in the legislature." Then he draws this conclusion: "The budget is thus, in fact, prepared, not by a strictly executive body."

All of these statements of fact are accepted as true except the implication or innuendo noted in the first that goes with the phrase, "comparable in some respects to executive offices in this country." From this and the conclusion it is implied that the "cabinet ministers" are not "a strictly executive body." May not this be quite misleading? Professor Fairlie doubtless has in mind some difference between the status of executive officers in Canada and in the United States; but to say that our officers are executive and that their ministers are not executive is a somewhat bald assumption. As measured by every test of experience the ministers of Ontario are in every respect executives. In fact, they are more truly executive than are any of our officers in the states, more truly executive than the president's cabinet, and the prime minister is more truly executive than the president himself. They are as truly executive as are the president and heads of departments of our great private corporations.

Nor is there anything vital in the fact of their ministers being "members of the legislative body," except that thereby they are entitled to and it is their duty to attend the meetings of that body. This is exactly what an executive is entitled to do, and in fact is expected to do, in any corporation meeting, but they are expected not only to attend but also to be heard. There can be but little value assigned to the fact that they have, or have not, a right to vote. As a matter of experience it is found that an executive's right to vote or not to vote at a board meeting is not the important thing. The important thing is that he is present and that he has a right to be heard; that he is expected to take leadership in laying before the members of the representative body when they come together an account of past transactions and his plans for future action. This is not alone important to the executive; it is equally important to the representative body and to the electorate. The historic reason for the cabinet minister's being a member of the representative body in Canada is to be found in the monarchical and not in the representative system.

Professor Fairlie's observation that ministers are "the political leaders of the majority of the legislature" is also open to the same criticism when it carries with it the conclusion or implication that

therefore the ministers are not executives. The fact is that every executive who has a right to sit in a representative body and to be heard is, in the very nature of things, the leader of a majority. If he did not have a majority back of him he would not be there; and by the same token he would not be fit to be an executive. The chief reason for having a representative body is to come together from time to time to find out what has been done and to make decisions about the future. The only way that representatives can perform this function effectively is to have those who have been carrying on the business come before them, make a statement of affairs, and give them the benefit of their thinking about the future of the undertaking. When executives do come before the boards they come there holding a commission from the majority; they are chosen for their abilities as leaders. When their leadership is not supported, then good management requires that they resign or carry the question at issue to the stockholders or their electorate. This does not mean that they are any less executives; this is one of the essentials of an executive who is worthy of the name.

Professor Fairlie's conclusion that the financial plan when thus presented is not, in fact, prepared and presented by a strictly executive body, cannot be supported by fact or by any chain of reasoning that is consistent with good management. It is based on analogy drawn from systems of control that in every instance have proved failures and that have been subversive of the representative principle itself.

The further observation that "there has been one [only one] party change in the government of Ontario for nearly fifty years" and the conclusion "that the challenge of the provincial treasurer to the Opposition was mere *brutum fulmen*—a play to the galleries," are the results of reasoning from premises that are questioned. The facts to which attention should be called are these: that the executive could have been retired at any time; that the reason for only one party change was that, having been given full opportunity to know and to criticize, having full publicity given both to criticism and to discussion, the executive was able to keep a majority of the representatives of the people behind him. Likewise it is to be observed that the majority members who supported the executive were able to keep a majority of the electorate behind them.

The conclusions to be drawn are these: that a responsible executive leadership makes for *careful planning*; that a legislative procedure which provides for *full publicity* makes for continuity of management. That is, by requiring the executive at all times to keep a majority back of him and his plans, the people follow the government and support

the government. The mere fact that the finance bill is not the particular measure that is taken before the people at an election when a division occurs is of small moment. The thing that the critics of executive affairs bring to a test vote is more usually some matter of policy that may better be made a basis for popular appeal. The detailed questions of management are constantly the subject of criticism and publicity.

Professor Fairlie raises certain constitutional difficulties. "If," says he, "the proposal is to be seriously considered certain problems must be faced and definitely answered." The question raised by him is, "whether in case of conflict between the executive and the legislature the decision is to be made (a) by the dissolution of the legislature, (b) by the recall of the governor, or (c) by a direct referendum.

Comment on the first possibility immediately follows: "If the first of these methods is used the result is more than likely to confuse the action of the legislature."

True, but what of it? If the legislature is truly representative of public opinion, this should be the result. But a majority of the legislature does not always represent public opinion on the specific issue. A deadlock may have arisen on some question with respect to which the electorate has never expressed itself—and this is usually what happens. The procedure, however, is one which brings before the electorate a real live issue which the people can understand and concerning which they can express an opinion by a "yes" or "no" vote. It is a matter on which the facts and arguments of both sides have already been given wide publicity through the questions and answers to the arguments of leaders on the floor of the legislative branch. It brings before the public candidates who stand for real issues. The choice of the people is between men whose abilities as managers of public business have been tested and who stand out among other men that have been serving the public. When the vote is taken it not only is a declaration of policy but results in the selection of the most able man in public life. Comparison of this result with what obtains on this side of the line leaves nothing further to be said.

Professor Fairlie's comment on the second possibility is this: "If decision is to be made on referendum or recall of the governor and the governor's budget is approved, the legislature will soon be reduced to an agency for ratifying the governor's proposals." Again may we say, what of it? Is it better to ratify the individual proposals of from two to six hundred members of a legislative body representing local constituencies than it is to ratify the proposals of an executive who has

been elected by the whole people and who spends his whole time thinking about the business in hand? Is it better to ratify one or another of the proposals of men who have no responsibility whatever for administration and who have little or no contact with the current management of affairs? Which has produced better results in the past, the ratification of log-rolling proposals of individual members or the ratification of the well-considered plans of responsible executive leaders? Or is Professor Fairlie disturbed because the legislature on financial measures will be reduced to a ratifying agency? What else can a legislature do on matters of finance? Assuming that finance measures are initiated in a standing committee, is not the legislative body still a ratifying agency? But furthermore, when they ratify the proposals of their standing committee they do so in a very different frame of mind and as a result of a very different procedure than when they ratify the proposals of the executive. When the executive lays before them a measure for approval or disapproval they put themselves in a critical attitude, and members are given opportunity to ask questions openly of the executive and to have them answered publicly. Furthermore, the "committee-of-the-whole" procedure becomes an important factor and the floor of the legislature becomes an opportunity for the Opposition.

Where executive officers are required to lay before legislatures their proposals, publicity is the keynote of legislative procedure; where a legislative committee in the hands of a legislative majority leader that cannot be held responsible to the state or nation initiates the measure to be ratified, the procedure is one of "gag-rule," the purpose being to forestall criticism and to protect those who stand with this irresponsible leader. These are differences that are fundamental in their importance. There is nothing to be feared from the legislature being "reduced to an agency for ratifying executive proposals." The review, ratification, or rejection of executive proposals is what in last analysis the legislative branch has been created for so far as relates to matters of finance.

Professor Fairlie agrees that many of the essentials of a good budget practice can be developed gradually by statute or legislative procedure, without changing the Constitution. The thing that he argues for, however, is the creation of a joint commission or body, partly executive and partly legislative, to lay before the representative body a financial plan or budget. With this conclusion may I also take issue? There is little in experience to commend it, except as a temporizing measure. Without question a plan which confuses responsibility is better than no plan, as it gives some basis for consideration, discussion, and publicity

of the affairs of the government as a whole. I do not suggest that this should not be adopted if something better cannot be had. My point is that it is a weak and temporizing measure and never has and never will work out satisfactorily. Furthermore, in principle it is wrong. The historic reason and the institutional purposes of the representative system are to provide a means for making the executive, the one who has the machinery of government in his hands, responsive and responsible to the people.

Under monarchical systems the representative idea was forced on the executive not to deprive him of leadership, but to make his leadership responsible and responsive. The purpose was to control executive action and to make those who do things subservient to the will of those who are served. Where representative systems have been developed from pure democracies the reason for their adoption has lain in the inability of a numerous and widely scattered people to get together for the purpose of critical review, discussion, and approval or disapproval of the actions and proposals of their public officers. They therefore, being unable to come together at a common point and have their officers appear before them and give an account of themselves, created a representative body which would meet, and, for all intents and purposes, when meeting, would be the people. Furthermore, even when the people met together it was necessary to have it clearly understood who would have the right to voice the will of the majority—therefore the electorate.

The solution for our lack of financial planning, for our irresponsible, irresponsive, invisible, and wasteful government proposed by Professor Fairlie, is not, in my opinion, well adapted to the ends to be accomplished. By combining critical and executive functions, both are weakened. This principle is recognized in the administration of justice; it is recognized in all of our affairs in state and local governments where such an arrangement has been tried, although it may have been an improvement over what was before. With all of the subversive practices that have grown up with lack of leadership and lack of provision for enforcing responsibility, still the expedient has been unsuccessful. In New York State, for example, it proved an utter failure. In Wisconsin it has worked better, but nevertheless still confuses responsibility and does not give to the state responsible government. If the purpose is to make executive officers responsive and responsible, then having certain members of the court of public opinion sit down with the defendant to prepare his case is not going to contribute to public welfare.

If we are to make our legislatures effective for review, criticism, and approval or disapproval of executive action, two things must be done: (1) The executive must be required to come before the legislative body—the people in session—with a report of past acts and plans for future work, and be made to wait for future authority on their approval. (2) There must be a procedure which will give full publicity to legislative criticism as well as to legislative acts in order that our scheme of representative government may reach to the electorate as a part of the machinery of control. Both of these things must be done without constitutional amendment, but they will not be done without a public opinion that will demand them. The chief danger that goes with palliative makeshifts, however much they may alleviate present suffering, is that they allay distress without reaching the cause of the malady.

THE ECONOMIC COSTS OF WAR

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There are effects of war which are more tragic than the economic burden it will place on future generations and there are some that are more morally revolting; but there are none which will last longer or do a greater total amount of harm. What we chiefly need to know is in what condition nations will find themselves when they have added, let us say, fifty billions of dollars to their previous debts and have, at the same time, greatly reduced their power to pay debts. Some of the effects of this burden in fettering and crushing the life of the future will transcend all economic measurements, much as do the killing, maiming, and general ravaging that have already gone on. Only the purely economic effects lend themselves to measurement, and a few principles applying to these are what this paper will attempt to state.

War is a stupendous phenomenon of Economic Dynamics, and yet it apparently reverses the ordinary economic processes in a way that should put it beyond the application of the principles of our science. Only in a department of economics devoted to the destruction of wealth and life would it seemingly find a place. For competitive production it substitutes competitive destruction. It depletes shops and crowds barracks, the occupants of which strive to outdo each other in putting out of existence products and producers. Its tools are guns, shells, dreadnaughts, and the like, and its labor is maiming and killing.

It is decapitalization on a vast scale. In place of voluntary abstinence for the benefit of the future it puts a reckless bartering away of the income of the future to make possible a prodigal expenditure in the present. The war fund, when secured, reverses the effect of ordinary capital, in that it is spent at once instead of being embodied in a self-perpetuating fund, and the spending of it intensifies a work of destruction carried on by a kind of human effort which itself is the reversal of ordinary labor. The soldier and his tools are the antitheses of the workman and his tools in their future effects as well as in their present ones, since they reduce the number and efficiency of future laborers who must help to pay the debts now created. Loans for warfare first put a heavy tax on the product of future industry and then destroy much of the power to pay it.

It is all under the sway of a highly organized competition which, in its effect, is the reverse of the ordinary kind. Striving to undersell rivals is striving to promote the welfare of the public more than rivals are promoting it and it does nothing to rivals directly. Indirectly it forces them also to do their utmost to serve the public, and the whole process makes for a fruitful industry now and a more fruitful one hereafter. Competitive maiming and killing blight present and future.

War raises to an extreme limit that discount on future values, or premium on present ones, that has played so large a part in recent economic theories, and that too in spite of the fact that what is sacrificed in the future is the means of maintaining life and welfare and what is secured in the present is the means of destroying both of them. It makes future life-sustaining goods of much less present value than present life-destroying goods. Apparently an amount of suffering and death now is worth vastly more than an equal amount of happiness and life hereafter. Even the honored and lamented Minister von Böhm-Bawerk never postulated that relation of present and future. It is no ordinary economy that would starve men hereafter in order to kill men now.

Is warfare then entirely outside of the realm of true economics? Has the Science of the Organized Production and Use of Wealth no place for the belligerent action which is now going on, and do its principles remain at present largely in abeyance? To say this would imply a highly inadequate view of the scope of our science. Warfare finds a place within it, and the treatment of it falls in one or two generic divisions of Economics as broadly conceived.

There is a place in the science for the private contentions that are involved in defining and vindicating the *ownership* of wealth—that is, in maintaining the institution of property. It is a crude institution in primitive times and is maintained in rough and irregular way. The club of the owner does the work of that of the policeman. International rights today are like the individual rights in their crudest stage and are attacked and defended in a similarly lawless and violent manner. There is a clear analogy between the economic effect of what a savage does in defending his hut and what a nation does in defending its domain.

If we cease to think of nations and look at individuals only, we shall find them doing much which reverses the productive process in the same sense in which warfare does so. Wealth consists in things which are capable of ownership, and in a rude society

ownership is precarious and is preserved by personal vigilance and much fighting. The production of wealth would amount to little if whatever a man might get as his share another could seize with impunity. The effective utility of anything that can be stolen *ad libitum* is practically nil, and preventing this nullifying of utility is an operation as truly economic as is creating it.

Over individuals there is now a state with its courts, its legislature, and its police power, which save them from the necessity for much fighting. Over the states themselves, even in what passes for high civilization, there is no such efficient government, and the defense of their territories and other possessions has to be done in the primitive, cave-dwelling fashion and with a vast destruction of life and wasting of goods; and yet this is the only ultimate resource which the world at present has for keeping the lands and goods of nations in that condition of ownership which is necessary in order that their service-rendering powers may be developed.

Nations, indeed, make war in order to extend their sovereignty over new territories, as well as to add to their wealth, and this purpose may be accomplished without directly wresting lands and goods from private owners. Mere addition to their power is one of the purposes in view. The wealth which comes from extending dominions is also a leading object. What is here claimed is that a condition in which national territories were free plunder would make even private property insecure, and that, in their *manner of guarding* what they have of both dominion and property, nations are like men in a low stage of evolution.

It takes no sharpness of vision to see that the possession or control of territory is the leading issue of the present war, and the defense of territory is a latter-day illustration of the violent and costly protective operation which, through many centuries of savage life, made the other economic processes possible. Granted that international law is imperfectly observed and without courts or police for applying and enforcing it, and international *faust recht* becomes, in a broad sense, an unavoidable economic phenomenon, though it is the most wasteful and irrational one that still survives. It falls in that generic division of economic effort which confers on goods the basic quality of appropriability. It is so crude a part of a system of world economics that every discharge of a forty-two centimetre gun calls imperiously for courts and laws of nations which would remand such diabolical agencies to

the limbo of a savage past. Better instrumentalities for accomplishing the same purpose are the supreme need of the world.

We have then to study the cost of performing, in a crude, blundering, and savage way, one of the primary economic functions, and the vast amount of that cost is due, not to the fact that the function is performed, but to the murderous way in which this is done. If it were not done at all—if national possessions had no protection—the state of the world would be even worse than it is. Warfare, though not a reversal of the whole economic process, is such a mode of performing a part of it that, if humanity is incapable of improving on the method, it should surrender its tenancy of the earth and let some other animal type evolve, through the aeons of the future, to a position of supremacy.

Of the economic costs due to war some are incurred while it is in progress and some in the longer intervals of peace. Of those of the former kind—the only one here discussed—some fall first on governments and then on the people, while others fall directly on the people, through the stoppage of production and the direct destruction which campaigns involve. In measuring today the entire effects of the present war on the belligerent countries one would have to ascertain how much wealth they will have left when the war is over and compare it with the amount they would have had if this war had not occurred and the accumulation due to peace had continued. The difference between these gross amounts is chargeable to the war; it can be measured only when hostilities are over and then only approximately.

That which it is most important to know is in what conditions the nations will find themselves if the struggle shall continue for a given period, say a year, longer. Forecasts of this kind, guesses though they be, the nations are compelled in some way to make, and it is these which enter into the problem of offering or accepting terms of peace.

From a moral point of view, and even from a military one, killing men is worse than destroying property; but in a baldly economic calculation it is not so. If war reduced all classes of a population alike, it would, on Malthusian principles, increase the earnings of the surviving laborers. Actually, however, it works selectively, killing and disabling the most productive workers and, by this effect, it will lessen the average *per capita* efficiency of a people. Not till new generations shall mature will this loss be made up. If war reduced capital only and all laborers survived

without injury, the earning power of an individual would be lessened more disastrously than it is. With the reduced capital a shrunken working force can create more wealth *per capita* than the full original number could have done.

War debts will clearly be the greatest economic disaster of the future that will be traceable to the present war. They will burden workers, somewhat through indirect taxes and much more through the prevention of measures of reform and improvement. There is a long list of costly things that labor has already demanded and will insist on when the war shall be over. Interest on debts, war pensions, and further outlays for armies and navies will absorb the greater part of what the countries can afford, and many reforms will have to wait. The states may be unable to pay what they will cost, even though they may be in danger of revolution if they refuse to do it. This evil, like others, will vary directly as the duration of the struggle and the status of humanity for a century will depend on the question how long it will last. Are there any clear economic principles which will determine the length of the war?

The defense of property by club law could not by the most liberal use of terms be rated as a part of a general wealth-creating process unless it were subject to some self-terminating principle. It is worth while to apply a simple formula, suggesting those of Economics, to the problem of fixing a natural period beyond which beings endowed with reason should not be expected to prolong a war.

Earlier wars have often been decided by military genius and high strategy still has its great importance, but if it is true that, in our day, the decisive fact is usually what, by a euphemism, is called "attrition"—the killing and disabling of men and the destruction of resources—we may confine our brief study to a war of this type. Uniform losses on the two sides must increase the preponderance of the one that has the stronger force and the larger equipment. If a million men are a unit and there are a hundred and fifty such units on one side and a hundred on the other, the original preponderance is as three to two, while after each party has lost fifty units the ratio becomes two to one. With only twenty-five more taken from each force it becomes three to one, and it is as five to one after a total loss on each side of eighty-seven and a half. Of course, exactly the same principle applies to a superiority in resources. In the latter stages of a war that

is either long continued or terrifically destructive, a superiority in men and resources will crushingly tell. Can we make a formula indicating at what point the stronger side will be interested in offering terms which the weaker will be impelled by interest to accept? This is equivalent to asking at what point mediation will be certain to be acceptable to both sides.

We have to assume that there are two contending parties in the war and that, at some date, the ultimate decision between them is foreshadowed with a strong probability of correctness. The most uncertain thing which one can attempt to forecast is the outcome of a single battle. Mob psychology may set strength at naught and a battle may be lost by a panic, and even in an extensive campaign chance has its place; but a long war carried on in modern trenches by disciplined troops is far less capricious in its results and, if one can fairly assume anything like equality in the waste of men and munitions, there is a basis for a quasi-economic formula which will express, in terms akin to those of our science, a principle which should determine when negotiations for peace would naturally begin and what would naturally be the terms of settlement, provided always that reason were in control on the two sides.

To make the decision hinge baldly on intelligent self-interest we must partially revive a classical mode of study and use it heroically. We must make one quasi-economic being out of each of the warring nations or leagues of nations in its collective entirety. Each of them must become, as it were, a coolly reasoning organism—a vast composite calculating machine—endeavoring to ascertain what line of conduct will best protect the aggregate of its many and varied interests. This implies that stronger and weaker alike are influenced by nothing except the effect which their action will have on themselves. We leave out of account every sentiment of love or hate, of gratitude or revenge, and consider that regard for justice is qualified to the vanishing point by an assumed right of conquest. The lives of a country's own citizens figure merely as a cost and are weighed against values to be gained. They will be sacrificed if the gain is the greater. The calculation to be made is so pitiless and remorseless that one regards himself as something of a barbarian for making it in theory, and yet it isolates dominant forces which actually will have play in determining the time and the manner of ending the war. If attrition is decisive, a stronger nation or league at war with a weaker one can

ultimately demand in territory or in money whatever its own interest impels it to demand and, whenever the attrition of the war has gone to such a point that both sides have discovered to which of them in the end victory must fall, the terms which the stronger is interested in offering, the weaker is interested in accepting.¹

The most that the prospective victor can, in cool self-interest, ask for is all that he could secure by pushing his conquest to the bitter end minus the cost of so pushing it. The cost is miscellaneous. Life, treasure, future efficiency, both economic and military, are sacrificed by every act of further struggle. Such a grand composite of varied costs has in some way to be roughly computed and deducted from the sum total of varied and miscellaneous gains which a complete conquest would ultimately bring. There is no clear unit of measurement of such composite values—no money for appraising life, health, strength, territory, freedom, and international prestige or dominance. What a people has to do is to decide how powerfully the aggregate of such things appeals to it as a motive for action—how much sacrifice, all in all, it is really worth. It must gauge the importance of all that will happen to it in consequence of continuing to fight and compare it with the importance of what will happen if it stops.

If the victor can secure the terms described, he has nothing to gain by prolonging the struggle. Everything that, by further fighting, he can add to his gains will be neutralized by the cost of it. Whatever he can save in cost he should deduct from the

¹ It is necessary, in war as in business, to act on probabilities instead of on certainties, and the manner in which probabilities are computed, if our time sufficed for it, should be stated. After making an investment a business man knows that his principal may return to him with a surplus or it may have gone from him forever, and it may even have carried more wealth with it. If the chances are even, the prospective gain must greatly exceed the possible loss to make the operation rational. Every diminution of the probability of success greatly increases the gain that the success must promise in order to offset, as a motive, the danger of a given loss. Every increase in the magnitude of the transaction has a like effect. A man would act insanely if he took a chance of losing his entire fortune for the sake of an equal chance of doubling it. The total loss would injure him indefinitely more than the possible increase would benefit him. Nations at war are dealing with the largest values that figure in any transactions. The evil of a crushing defeat is beyond computation and a stray probability of suffering it would in a cool calculation outweigh any gain which a war could well bring. As a rational motive for keeping the peace such a probability approximates a certainty.

terms which, by further fighting, he could ultimately exact, and to do otherwise would mark his conduct as dictated by unintelligent anger or revenge, rather than by self-interest as revealed by rational, even if heartless, calculation.

The weaker party is impelled by interest to accept, the moment they are offered, the terms which the formula yields. If he refuses them, the victor will continue the war and every day will make the terms harder. It will lessen the deduction which the victor is willing to make from the utmost he can finally get. The maximum which he can ultimately exact reduced by the cost of a year of warfare affords for the conquered side a more tolerable basis of settlement than the same maximum minus the cost of only one half-year of warfare, which is what he would be impelled to accept if the struggle should continue for six months longer. At the last possible day of settlement bare self-preservation may become impossible.

It is, of course, perfectly apparent that influences which our formula intentionally omits from the calculation are varied and important. Restoring to the leagues the human qualities that we have, in imagination, taken out of them will make a victor temper the terms offered. The formula defines a savage maximum which might be offered by the stronger and accepted by the weaker if both were dehumanized with heroic thoroughness. Humane impulses are not extinct in international affairs and justice is not dead. "A decent regard for the opinion of mankind" is powerful and the future attitude of a neutral world must be taken into account. An intelligent regard for a long future will rate the good will even of conquered nations as of high importance. All this must moderate the severity of the terms which brute force and crude self-interest would otherwise dictate. And yet even the formula as it stands does less violence to facts than it would if it were applied to individual citizens of a common country. The sovereignty that is over these citizens not only affects their outward conduct but molds their character. Nations are more like "economic men" than men are, and the strong and dominating forces which impel warring nations toward a certain more or less definite line of action need to be isolated and recognized for what they are. Nations do deal with each other on a relatively low moral plane and the future of the world is not unlikely to be gravely affected by titanic forces operating in a savage and crudely calculating way. Within the states justice holds savag-

ery in check and positive institutions make the check effective. As between the states, in a time of peace the checks are inadequate and in a time of war the demons are uppermost. Far otherwise would it be if international laws were clearly defined and generally respected, if there were a court to apply them and a league of nations to give efficiency to the court. So limitless is the improvement of the whole status of humanity which something that looks like a relatively small institutional change would cause. The boundaries of Paradise and Sheol are not far apart and a few steps, that will not be difficult if the nations have the will and the intelligence to make them, will carry humanity from the one realm to the other. Unless states which are separately mighty are collectively imbecile, the difficulties in the way of this consummation will be overcome.

THE STATISTICAL SIDE OF THE ECONOMIC COSTS OF WAR

By WILLIAM S. ROSSITER

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Your attention is invited, first, to a brief survey of direct and indirect costs in the present war, in order to establish a background of approximate total cost; second, to some analysis of the population and debt conditions existing at the close of the Napoleonic Wars, in order to establish certain standards; and, finally, to a brief analysis of population and debt conditions at the outbreak of the present war, during its progress, and which are likely to prevail after two years of hostilities.

The science of statistics has reached its present perfection principally through the enumeration and analysis of population. Orderly government and peace between civilized nations thus have been essential to its development. In consequence the generally peaceful century which began with the Battle of Waterloo in Belgium and ended in Belgium at Liège, has witnessed the adoption of improved statistical methods and the measurement statistically of almost all national and economic problems.

The service which this comparatively new science, developed by general peace, is able to render in throwing light on changes and trend in population and industry, has now been expanded to measure direct and indirect war costs.

It is characteristic of our time that the demand is urgent for prompt and accurate statistical measurement of such costs. Yet it is a task not to be lightly undertaken. The direct cost of the maintenance of hostile armies and fleets for one day at any time during the past year and a half of war probably has been greater than the cost from beginning to end of entire campaigns at earlier periods, even those of the eighteenth century. Moreover, back of this expenditure are unprecedented indirect burdens and possible indemnities.

More than a year after the termination of the Franco-German War Sir Robert Giffen prepared an able and exhaustive analysis of the cost of that conflict. He demonstrated that the direct and indirect war losses sustained by France aggregated \$2,916,000,000, and that Germany had made a net profit from the war over

all direct and indirect costs of \$845,600,000. The Franco-German War was thus shown to be a colossal money-making adventure for Germany.¹

Sir Robert Giffen's paper, after forty years, continues to be a model in method and treatment, but the distinguished author had the advantage of dealing with a completed chapter of history. While the current literature relating to war costs is important and often illuminating, no analysis of such costs made during the progress of a conflict can be accepted as other than a study, enlightening but incomplete, and generally possessing no permanent value. Compilations of figures still breathing—as it were—cast into tabulations, computations eked out with estimates, and official figures which change, do not form a firm basis for final conclusions. In this perilous time all things are in a state of flux. Nothing is certain but the national debt, and that increases between galley and page proof.

Even Mr. Edgar Crammond's noteworthy paper² upon the costs of the war, read before the Royal Statistical Society in March last, should be accepted only as a valuable and learned study. He himself seems to have realized the limitations of statistics of a war still in progress and so projected his analysis of costs forward to July 31, 1915. Computations for hostile countries, however, obviously cannot be accepted as complete or final; gaps are bridged with estimates, and inconsistencies appear. Yet Mr. Crammond's paper is likely in some respects to be the leading authority for the period it covers until such future time as complete official returns of war costs are available. Material from it already has been widely used, and occasionally without credit. In one respect, however, the English statistician's computations are open to grave question. While Sir Robert Giffen prudently avoided including in his analysis of indirect costs of war the capitalized value of human life, Mr. Crammond computes this cost in terms of pounds sterling, and falls into the inconsistency of including the capitalized value of dead soldiers in the aggregate loss for each nation, which is then compared with annual income and the proportion is suggested which it forms of the national wealth. Obviously such a comparison possesses no significance whatever. National wealth rep-

¹ Giffen, "Cost of the Franco-German War," *Economic Inquiries and Studies*, Vol. I, p. 43.

² "The Cost of the War," *Journal of the Royal Statistical Society*, May, 1916.

resents material things; according to the sounder view money value of men forms no part of it.

The only possible way in which a comparison can be established is to compute the total value of all workers in a nation and to increase the national wealth by that aggregate. Total direct and indirect costs of war which include capitalized value of workers who have been put out of existence can then be compared correctly with national wealth increased to include the value of all workers.

A second and better method is to separate the rather doubtful computation covering the money value of human life from other indirect costs and present it alone.

Costs of the Present War

The following summary of costs of war to August, 1915, has been drawn principally from figures presented in Mr. Crammond's paper. They comprise the direct cost of war to the nations concerned and to individuals, but not the capitalized value of lives lost.

Within the brief period covered by this war Belgium has been denationalized, and industrial, commercial, and financial life have been gravely impaired. Considered by leading towns the loss of property amounted to more than one billion dollars, to which should be added the direct cost of the Belgian army and the loss of production. Up to August 1, 1915, the aggregate loss of Belgium seems to approximate two billion four hundred million dollars.

In France the losses have been so great and arise from such a variety of causes that one is constrained to admire the fortitude of the French people, bearing as they do not only the costs of prosecuting the war, but also the burden resulting from devastation and loss of territory. Some of the most important manufacturing districts of France were ravaged during the advance of the German army toward Paris. The total losses through destruction in the twelve departments invaded have been placed at eight hundred million dollars. Raw materials valued at two hundred and fifty million dollars were seized. German troops still occupy about seven thousand square miles of French territory. Considering the direct cost of war, the loss of national income, and the destruction of property, the total loss ascribed to France up to August last approximated nearly six and three quarters billion dollars.

A computation made in the early spring of 1915 cannot be accepted as possessing the same accuracy for Russia as similar computations for other countries. So extensive was the destruction of property during the successive defeats of the Russian army from March to October, 1915, that the addition reasonably can be made of two billions of dollars to the total of more than six billions allotted by Mr. Crammond as the Russian contribution to the toll of war loss.

The Austro-Hungarian losses, comprising direct loss in cost of war to the Imperial Government and the loss of production and the destruction of property in Austrian provinces, is set approximately at six and a quarter billions of dollars.

Much attention is paid by the English statistician to the losses estimated to have been incurred by the German Empire. After an exhaustive discussion of the German expenditures, he discovers the cost to have been greater than that incurred by any other nation. The total loss is represented by direct cost of war to the government and cities, loss of agricultural production, of manufacturing products, of interest on investments abroad, of earnings from shipping and from banking houses, and profits of insurance and mercantile houses engaged in business abroad, totalling more than nine billions of dollars.

It would not be just to suggest that Mr. Crammond was biased in his analysis of German losses, but the suspicion arises that he found the task of compiling this particular chapter so congenial that he applied himself to it with renewed and rather exceptional diligence, so that few classes of loss were overlooked. In short, while the accuracy of the computation of German loss is not challenged, it is possible that the total loss reported for Germany is a little larger proportionately than for the other nations. Had their operations been subjected to the same intensive examination possibly additional losses might have developed. These suspicions are not allayed by Mr. Crammond's opinion that "the spectre of famine will haunt the German people long before the 1915 harvest is gathered."

The loss of the United Kingdom is comprised under these items: loss to the Government and the overseas dominion, loss of production, and loss of income from banking profits. The aggregate loss is set at less than five billions of dollars. With this total the English statistician arrives at a loss for his own nation far less than

that incurred by any of the great powers at war, except Italy, which is not mentioned.

The extreme zeal manifested in analyzing German loss creates suspicion of unconscious reluctance to proceed too far in computing British loss. Insufficient reference seems to have been made to colonial costs in treasure and lives, and no loss is admitted from destruction of shipping. Furthermore, the naval losses of both Germany and Great Britain have been considerable. To November 20, 1915, Germany appears to have lost sixty-eight naval vessels with tonnage aggregating 251,623; Great Britain, forty-two naval vessels, aggregating 268,682 tons.³ The loss thus caused to the German Government approximated \$100,500,000; to that of Great Britain \$107,500,000.⁴ About half only of these valuations are included in the English statistician's study.

British war disbursements which were computed by Mr. Crammond at from \$10,000,000 to \$12,500,000 daily, advanced, as a matter of fact, to \$17,500,000,000 before July 31 and continued to rise. Government expense and probably also the indirect expenses seem to have increased at higher rates than were allowed in Mr. Crammond's calculations.

It should be observed that Italy, Turkey, Bulgaria, and Servia are not included in the above summary. Mr. Crammond's analysis indicates that direct government obligations for war represent approximately one half of the total costs thus far developed. The Italian war loans now amount to \$579,000,000. Assuming this to be one half of the cost of the war to Italy thus far, the total cost has been \$1,158,000,000. To Turkey, Servia, and Bulgaria the aggregate cost of the war cannot be less than one billion dollars. Furthermore all the nations of Europe which have preserved a neutral attitude nevertheless have incurred losses which in some cases are very heavy. Probably they exceed in all a half billion of dollars, since mobilization occurred more than a year ago in Switzerland and Holland. The maintenance of standing armies in those small nations and for a brief period in Roumania and Greece has been a source of large expense. Returning therefore to the summarized cost of the present war, the total losses computed by Mr. Crammond, with the additions here noted, are these:

³ Naval Losses in the War, *Boston Transcript*, Nov. 19, 1915.

⁴ Computed on the usual basis of a ton value of \$400.

DIRECT AND INDIRECT COST OF WAR TO JULY 31, 1915	
Belgium	\$2,354,390,000
France	6,504,624,000
Russia	8,346,000,000
Great Britain	4,475,880,000
Austria-Hungary	6,133,320,000
Germany	9,214,560,000
Italy	1,158,000,000
Turkey, Servia, Bulgaria, and loss of neutral nations, estimated	1,500,000,000
Total	\$39,696,774,000

If we classify this total by allied nations it appears that up to the end of July, 1915, Germany and her allies had incurred a loss of approximately seventeen billion dollars, while, to the same date, France, Great Britain, and their allies incurred a loss of more than twenty-two billions. Although these figures are beyond the power of the human mind to grasp, they do not adequately represent the present costs of the great war.

The date to which Mr. Crammond's computation was projected (August 1, 1915) long since has passed. With the approach of the year 1916 no signs of peace appear, but expenditures increase. The British Chancellor of the Exchequer, speaking in September, estimated that the war debt of Great Britain would amount to \$7,500,000,000 by April 1, 1916. In the same month (September 15) the Prime Minister informed the House of Commons that the expenditure had averaged \$13,500,000 daily from April 1 to the end of June; from July 1 to 17, \$15,000,000 daily; and from July 18 to September 11 over \$17,500,000 daily.⁵ Carrying forward this narrative of rising costs, the Prime Minister announced on November 10 that the daily expenditure from September 12 to November 6 averaged \$21,041,000, and that during the next two months war costs were likely to reach almost \$25,000,000 daily. He further stated that the new credits requested would provide for British war expenditures and loans to February 16, 1916, at which date the government war loans would total approximately \$8,000,000,000.⁶ This indicates that from the Chancellor's estimate of early September the war debt increased half a billion dollars and the period over which the smaller sum had been expected to extend was not reduced by six weeks,—costly weeks still to be covered at \$25,000,000 per day. Thus the estimates made

⁵ *Circular of the National City Bank of New York*, October, 1915, p. 5.

⁶ *Boston Herald Cable Dispatch*, Nov. 11, 1915.

by a British cabinet minister in September to provide for the probable war expenditure for less than seven months of the immediate future were raised two months later one and a half billion dollars to cover the same period.

Mr. Crammond estimated British government expenditure for the first year of hostilities, that is, to August, 1915, at approximately \$3,500,000,000. Eight months later, however (April 1, 1916), the war debt will stand at \$9,000,000,000,—if the amount is not again raised.

The foregoing statement illustrates the gathering volume of war cost, vast as it was earlier in the conflict, and also the difficulties which confront the statistician who attempts to measure war in the making. It is clearly evident from the changed proportions of British war expenditure (typical of that in progress in both groups of belligerents) that the aggregate of \$39,696,774,000, already noted, which comprised direct and some indirect loss and the expenditures of small nations and of mobilized neutrals to August 1, 1915, long since has been left far behind. War costs generally appear to have been increasing, and this, perhaps, must be expected for a time. The aggregate costs during the first year of the war, approximating \$40,000,000,000, computed on the same basis, have now advanced to nearly \$55,000,000,000 and will have mounted to approximately \$80,000,000,000 by August 1, 1916, the end of the second year.

Incomprehensible as this total is, there is no certainty that its magnitude is sufficiently overwhelming to compel peace. Moreover, in the shadow of colossal expenditure for prosecuting the war and the heavier burden of indirect cost lurks the probability of oppressive indemnity.

Capitalized Value of Human Life

Some reference is appropriate here to that perplexing item of indirect cost of war represented by loss of human life. Whatever diversity of opinion may exist concerning the amount or influence of this loss, we shall agree that the death or total incapacity of millions of the strongest and most capable men in the great nations of Europe inflicts upon each a grievous loss, not only in human strength, but in capital and income. We also shall agree that no standard for this loss can be established without a general knowledge of the size and value of the whole age group from which those who are killed or incapacitated are withdrawn.

In 1910 or 1911 the number of men within the age group approximately 15-50 years in the nations now at war was as follows:

MALES OF VIRILE AGE (15-50) IN POWERS AT WAR, 1910-1911¹

Austria-Hungary	
Austria	6,919,000
Hungary	5,816,000
Belgium	2,089,650
France	10,034,400
Germany	13,658,578
Italy	7,426,807
Russia	28,661,500
United Kingdom	
England and Wales	8,917,571
Scotland	1,146,739
Ireland	1,094,361
Total	87,764,606

From these returns it appears that at the most recent census males of virile age in the nations specified approximated 88,000,000 men. This aggregate of course included the defectives of all classes within the age groups, estimated by some authorities at 25 per cent. On the other hand the return is for 1910-11 and thus the aggregate is smaller than actually existed in 1914. Accepting 80,000,000 as a reasonable base, what is the average value of this vast group of human workers?

Sir Robert Giffen, in his half-apologetic discussion of the value of human beings in pounds sterling,⁸ computed the average earning power of each active male at £40, or about \$200. He then reckoned the present value of an annuity of £1 on a single life at the age of 25, and arrived at a valuation per worker of £600.

Crammond, citing various authorities, concludes that workers are worth sums varying in different European countries from \$1964 for a Russian to \$4024 for an Englishman. Upon the basis of these figures he computes the lives lost to July 31, 1915, as worth an aggregate of \$11,475,000,000, an average value of \$2933.

¹ Compiled from respective census reports, the age groups and census years being as follows: Austria, years 15-50, computed from Austrian census, 1900; Hungary, years 15-59, census of Hungary, p. 14; France, years 15-50, estimated from census of France, 1906; Belgium, years 15-55, census of Belgium, 1910; Germany, years 16-50, census of Germany, 1910; Italy, years 16-50, census of Italy, 1911; Russia, years 16-50, estimated, census of Russia, 1897; Great Britain, years 16-50, census of England and Wales, Scotland, and Ireland, 1911.

⁸ "Cost of the Franco-German War," *loc. cit.*

If this valuation be applied to all male workers of virile age in the six powers at war, already computed to number 80,000,000, it appears that the aggregate capitalized value of human life represented in this element of the population is \$234,640,000,000.

It has been estimated by Dr. S. N. D. North, the statistician of the Carnegie Foundation for International Peace, that in July, 1915, the armies of the warring nations aggregated approximately 23,375,000 men. To this should be added the Italian and Bulgarian armies estimated at 1,400,000, the new Russian armies and new levies, aggregating in all perhaps 6,500,000 men. Hence, in the absence of more definite information, the aggregate number of men called to the colors by the end of the second year may be set at 30,000,000. Losses for the first year were computed by Mr. Crammond to range from 11 per cent to 33 per cent. Assuming the war to last for two years, 40 per cent would be a moderate approximation of loss likely to cover service mortality and incapacitated survivors. Such proportion would imply a loss from all causes of fighting men to the number of 12,000,000. The capitalized value of this number of human beings upon the basis of the previous computation of human war loss would be \$35,196,000,000, or about one sixth of \$235,000,000,000, previously computed as the capitalized value of all males of virile age in these nations.

Attempts to capitalize the value of human life proceed necessarily from an uncertain base. Even if a definite valuation be established, the number killed and incapacitated in the present war is now and will long continue to be a matter of conjecture. Of doubtful value under the most favorable conditions, the foregoing computation of capitalized value of human life is included here principally as an illustration of the magnitude of indirect loss in this war,—a loss made more striking by being expressed in terms of money value.

Let us not, however, fall into the error of concluding that the nations at war are wrecked or impoverished, or that these extreme conditions will obtain even at the end of another year of warfare. The human race has busied itself through the ages with two principal tasks: destruction and rebuilding. The history of Europe is a record of almost ceaseless conflicts, many of which lasted to the point of actual exhaustion. In the great march of events it matters little whether Hannibal is devastating the plains of Italy or the German is obliterating Belgium,—or annihilating Serbia. In our time population and wealth have greatly increased, conse-

quently the absolute figures of carnage and waste are much greater, but proportionately the change is less pronounced.

If we agree that destruction today is vast and recovery tomorrow vast also, is there no measurement to be contrived from past experience with which we may in a manner determine debt limitations, and by which we may reassure ourselves concerning population recovery?

We observe that a certain vague similarity exists between the events in Europe a century ago and those of the present time, since the great powers—and for the most part the same powers though with different alignment—are again at war. What light, if any, is to be thrown upon modern war problems by the population and debt conditions which prevailed at the close of the Napoleonic Wars?

Population at the Close of the Napoleonic Wars

In the year 1816 the great nations were emerging exhausted from the then greatest conflict the world had known. These recurring wars had involved most of Europe, and had lasted, with brief periods of armed peace, from 1793 to 1815. During this period of twenty-two years the upheavals of society in France and in Great Britain, and great industrial changes, created a widespread demand for statistical information and led to the establishment of periodic census taking. From these returns and for other nations from such computations as have weight, the population in 1816 of the countries now at war, appears to have been 164,390,143.

POPULATION IN 1816 OF THE NATIONS AT WAR IN 1915

Russia (Europe)	45,000,000 ¹⁰
France	29,676,148 ¹¹
Austria	27,000,000 ¹²
Germany	24,833,000 ¹²
United Kingdom	19,500,000 ¹⁴
Italy	18,380,995 ¹³
Total	164,390,143

¹⁰ *Statesman's Year Book*, 1915, p. 1272.

¹¹ *Census of France*, 1911, p. 16.

¹² Computed from Levasseur and Bodio, *De la superficie*, etc., pp. 46, 54, 61.

¹³ Computed from Bertillon, *Statistique Internationale résultant des Recensements de la population exécutés dans les divers Pays de l'Europe de le xix Siècle*, etc. (Paris. 1899), pp. 27, 30, 34, 70.

¹⁴ Whitaker's *Almanac*, 1915.

The population of Europe in 1816 was composed largely of peasantry, supporting themselves from the soil. The number of inhabitants per square mile in the nations here considered, exclusive of Russia, varied from 104 in Austria-Hungary to 166 in the Italian states. This remarkable uniformity reflected the generally agricultural character of the nations. After a quarter of a century of recurring wars most of the people were poor and bereaved, and countryside and city were war-scarred. The economic changes, however, which were impending were of the most revolutionary character.

By 1816 the application of steam to industrial and transportation uses was opening in Europe a new realm of activity and profit, by which, with safe and rapid interchange of products, employment was provided for additional millions. Moreover, here was actually an invitation to nations already well populated and having small geographic areas to increase their population.

After the passage of 100 years (in 1914) the population of the great powers now at war was as follows:

POPULATION IN 1914 OF THE NATIONS ABOUT TO ENGAGE IN WAR

Russia (In Europe, including Poland).....	141,679,176 ¹⁸
Germany	68,442,262 ¹⁹
Austria	51,080,081 ¹⁷
United Kingdom	46,498,959 ¹⁸
France	39,947,699 ¹⁹
Italy	35,597,784 ²⁰
Belgium	7,747,441 ²¹
Total	390,993,402

To increase due to industrial growth Russia proved an exception. Increase came to the Russian Empire in liberal measure because vast areas of fertile land and many natural advantages offered support and invited increase, so that the population of European Russia tripled in the century from 1816 to 1914.

¹⁸ *Statesman's Year Book*.

¹⁹ *Census of Germany*, 1910, Pt. 2, pp. 240-53; *Census U.S.*, 1910, Vol. 1, p. 252, Table 8.

¹⁷ *Census of Austria*, 1910, Vol. 1, Pt. 1, p. 49; *Census of Hungary*, 1910, p. 14; *Census of U.S.* Vol. 1, p. 252, Table 8.

¹⁸ *Censuses of England, Wales, Scotland, Ireland*, 1911.

¹⁹ *Census of France*, 1901, p. 978; 1911, Pt. 2, pp. 240-53.

²⁰ *Census of Italy*, 1911, Vol. 2, p. 638, Table 4; *Census U.S.*, 1910, Vol. 1, p. 252, Table 8.

²¹ *Census of Belgium*, 1910, Vol. 2, p. 470.

In Austria the inhabitants per square mile, 104 in 1816, became 195 in 1914.

France lagged behind in population growth. The number of inhabitants per square mile increased from 143 in 1816 to 193 in 1914. This was substantially the same as that attained by Austria upon larger area.

In the United Kingdom 160 inhabitants per square mile in 1816 became 382 in 1914. Possessing colonies around the world—several of them empires in themselves—the mother country became the manufacturing and urban centre for the empire. Therefore dense population in the United Kingdom does not necessarily indicate congestion. Italy, having the smallest geographic area of the group of nations here considered, increased in the number of inhabitants per square mile from 166 to 321.

The most significant changes occurred in the area which became the German Empire. In 1816 the inhabitants of Prussia and the other German states numbered 123 per square mile. Under the spur of amazing industrial development and perhaps in some unconscious way influenced by the conviction of destined world power, the inhabitants of Germany, though possessing small geographic area, grew so rapidly in numbers that they tended to congestion. In 1914 the population of the German Empire approached 70,000,000, having thus increased to nearly three times the population shown in 1816 upon practically the same area, a rate of increase exceeded only by Russia.

Colonial outlets, which the United Kingdom found so efficacious in meeting the same problem, were of doubtful value to Germany, or if of ultimate value, were slow of development. Emigration, the other main source of relief, also failed. From 1890 to 1910 the number of persons in the United States born in Germany decreased in number 283,561.²²

Austria and Italy found an outlet for a part of their surplus population by liberal emigration to other lands. In twenty years, from 1890 to 1910, the number of Austro-Hungarians in the United States increased from 303,812 to 1,670,624. Italians increased from 182,580 in 1890 to 1,343,125 in 1910, but German emigration declined to a negligible figure.²³ German increase, therefore, all appeared in Germany. The number of inhabitants

²² *U. S. Census*, 1890, Pt. 1, p. 607; 1910, Abstract, p. 190.

²³ The total emigration from the German Empire, 1909-13, inclusive, was 117,530. (*Statesman's Year Book*, 1915, p. 928.)

per square mile in the empire increased from 123 in 1816 to 328 in 1914. In short, in the great plan of preparedness, since 1816 child-bearing has been first in importance to the German Empire.

Of the six great nations here considered, Germany has thus revealed exceptional characteristics. It possessed in 1914 small area, supported a huge and increasing population, exhibited limitless self-confidence, and provided no outlet for its surplus numbers.

But if it was evident that the increase in the number of the German people was finding no adequate outlet and that the characteristics and temper of the nation were such as to suggest reversion to age-old methods of reducing population pressure, what shall be said today? Should Germany win the present contest, doubtless congestion will be relieved, as it has been relieved through the ages, by absorption of conquered territory. In that event the drama now being enacted before the modern world will have been simply the repetition (with a few concessions to civilization compared with ancient practices) of those great population movements which in the past arose generally in Asia and swept over vast areas with fire and sword.

But if Germany does not win, if the opposing nations succeed in controlling this natural rising of a great human tide, and confine the German race again within its narrow bounds, what then? In that event we shall agree that, if national calamity does not impair fertility, the present blood-letting process by war could not long relieve population congestion. Courage and virility can repair human losses for Germany within a decade or two, and then the process of steadily increasing population pressure must begin again. Except that one trial has failed because mistakes were made, in what respect would the new population condition then submitted to the statistician for interpretation differ from that which actually existed a decade ago?

Replenishing Human Loss

We have thus considered some aspects of normal population change in the powers now at war. In what respect are the losses occasioned by the war, and the influences of the great conflict, likely to affect the future population of the nations involved?

For the census decade nearest to 1914, population in the powers now at war increased as follows:

POPULATION INCREASE OF THE POWERS NOW AT WAR AS SHOWN BY THE
LATEST CENSUSES

Russia	27,148,442
Germany	8,625,060
Austria-Hungary	4,053,154
Great Britain	3,761,439
Belgium	730,226
France	349,242
Italy	2,196,124
Total	46,836,730

Assuming the births to be divided with practical equality between the sexes, the males born in these nations during this ten-year period exceeded those dying by approximately 23,000,000. Elsewhere it has been estimated that the war losses in human life will approximate 12,000,000 by July next. Upon the antebellum basis of increase, to replenish such loss would require more than five years' product of male births. Obviously a five-year period is too short. The population group of approximately 88,000,000 males of virile age will have been reduced by nearly fourteen per cent. While it is impossible to predict the effect upon population of sharp reduction in the number of males possessing high virility, it is probable that clear evidence of such reduction will appear. In some cases where increase long has been slow, as in the case of France, there is a grave possibility that the loss may never be recovered.

There is another factor to be here considered. Before the beginning of the present war males were in a decided minority in all six powers involved. Though the disproportion varied somewhat, the excess of females reached the rather remarkable aggregate of 5,600,000.²⁴ Emigration to America was in part responsible for

²⁴EXCESS OF FEMALES 1910-1911

Great Britain	1,328,625
France	634,000
Germany	841,800
Austria-Hungary	699,711
Russia (including Poland)	1,344,400
Italy	627,997
Belgium	62,206

Total 5,538,739

(Derived from official census tables specified in notes, page 104, except for Russia, for which figures are compiled from the *Russian Year Book*, 1912, and France, for which the excess is computed from the census of 1906.)

this condition though it occurs also in countries from which there are few departures. Added to the direct war loss of approximately 12,000,000, the male sex may be expected to begin the new era of peace to be hoped for after the close of this war 17,600,000 less in number than the female sex.

We are confronted here by two interesting statistical problems toward the solution of which no previous data exist.

First, will the new and grave aspect of life which accompanies the tragedies and momentous events of war, will bereavement, loss and quickened patriotism, and, above all, will instinct, lead the men and women who survive and take up the burdens of home and nation after this war to make good by increased fertility the loss in strong men which Europe has sustained?

Second: At the beginning of the nineteenth century, France, because of constant wars, was found to be reduced in proportion of males to females as 950 to 1000.²⁵ This proportion applied to the aggregate population of the six powers at war would result in an excess from all causes of approximately ten millions of females. Upon the assumption of an early termination of hostilities, the foregoing analysis has shown that an excess of not less than 17,600,000 females is to be expected at the close of the present war. This excess would represent for every 1000 women but 914 men.

Nature equips the male to meet emergencies of reasonable sex disproportion and through the ages seemingly has expected this condition to exist. But the impending disproportion in Europe will be unusual. It is possible, indeed, that sex equilibrium may be so distributed as to affect social and economic conditions for several decades. What, therefore, is to be the effect on population change of the great excess of women?

No statistician of our time has expected to see these problems worked out to a solution during his own lifetime, nor has he expected a solution to appear for many decades, yet before us in the quick march of events that are to follow the war which is now being waged, some great natural law will begin to reveal itself, under the influence of which men and women will set about the early repair of human loss, or else one or more of the nations involved in this conflict will face continued weakness, which is certain to lead to destruction or absorption at no distant date.

²⁵ Mulhall, *Dictionary of Statistics*.

Measurement of Indebtedness

There remains to apply briefly some measurement to changes in national indebtedness and increases due to the cost of war.

Utilizing again the historic year 1816 from which to establish comparisons, the national indebtedness in that year of the nations now at war was as follows:

NATIONAL DEBT IN 1816 OF POWERS NOW AT WAR

Country	National Debt ^a	Per Capita
Germany	\$125,000,000	\$5.00
Italy	125,000,000 ^c	7.00
France	250,000,000	9.00
Austria	415,000,000	14.00
Russia	765,000,000	17.00
Great Britain	4,502,180,000	224.00
	\$6,182,180,000	

In 1791, at the outbreak of the French Revolution, the national debt of France had reached burdensome figures, amounting to \$2,275,000,000, a per capita debt of about \$85. This was the largest debt in the world at the close of the eighteenth century, the next largest being that of Great Britain which approximated \$70 per capita. The French Revolution summarily disposed of the problem and burden of the national debt. Most of it was repudiated. Therefore, when France emerged from her troubled era of victory and defeat, in 1816, the acknowledged debt as included in the table above was little more in amount than one tenth of the repudiated debt.

Of greater interest and significance was the debt of Great Britain. It greatly exceeded the combined debt of the five other powers, indicating that for twenty-three years in victory and defeat the British nation had borne the burden of financing the Napoleonic Wars.

In 1793 the national debt of the United Kingdom approximated more than \$1,000,000,000, representing the accumulated debts of the Marlborough campaigns in the reign of Queen Anne, the debts of the first two Georges, and that incurred in connection with the American Revolution. To this total the Napoleonic Wars added \$3,007,501,715, resulting in 1816 in the great aggregate indebtedness recorded above, of \$4,500,000,000.

^a In 1816 or the nearest year for which figures are available.

The national wealth of Great Britain in 1816 has been estimated at \$12,500,000,000.²⁷ Hence the public debt was equivalent to more than one third of the national resources. The relationship is more striking when reduced to a per capita basis. The wealth per capita being \$625 and debt \$224.

In 1914 the national wealth of Great Britain was \$88,000,000,000, a seven or eightfold increase in one hundred years. The per capita wealth was thus \$1825. If the proportion of debt to wealth which existed in 1816 should be reached by the end of this war, the debt per capita would amount to \$654, consequently the British national debt could reach the colossal total of \$30,476,000,000, and still bear merely the same proportion which national debt per capita bore to national wealth per capita a century ago. Yet it does not follow that Great Britain, having carried a debt equal to one third of the national wealth in 1816, can duplicate this achievement, even if necessary, in 1916.

We all shall agree that the increase in national wealth makes it possible for the per capita burden of debt in 1916 to be somewhat increased over that borne in 1816.

But the extent of the increase beyond the earlier figure is another matter. Material increase in dead-weight debt beyond the per capita actually borne in 1816, without disaster in some form, is open to grave doubt. It must be remembered that the real value of our modern standard of measuring resources known as "national wealth" has never been tested before under strenuous demands of war.

Fortunately for Great Britain, in 1816 the civilized world was on the eve of an industrial awakening having no precedent in earlier history. The United Kingdom led in this form of development. The nation advanced in national wealth by rapid strides. Thus the burden of debt, so heavy at the close of the Napoleonic period, decreased until it ceased to be a burden, and the debt became merely a permanent and easily borne charge. After 1916, however, it is unlikely that the nation can duplicate the era of industrial creation which followed 1816. It will be no easy task merely to retain undiminished the great volume of business previously secured. It will be well-nigh impossible materially to increase it. Hence repetition in our time of the nation's success in lightening the burden of debt existing in 1816 by phenomenal increase in resources is not to be expected unless new avenues of wealth appear.

²⁷ Sir George Paish, in the *London Statist.*

Thus far in this discussion of indebtedness existing in 1816 as affording some means of measuring public indebtedness at the outbreak of the present war, attention has been devoted principally to Great Britain as the actual debt bearer of the earlier period. It has been pointed out that during the century from 1816 to 1914 population increased greatly in all of the six powers here included. Hence consideration of the following table which presents indebtedness for each of the powers as it would have been in 1914 if computed on the basis of the per capita debt existing in 1816, in comparison with the actual public debts of these powers in 1914 proves of some significance.

NATIONAL DEBT AS IT WOULD BE IN 1914 ON 1816 BASIS, AND ACTUAL DEBT

Country	Debt as it Would Have Been in 1914 on the 1816 per Capita.	Actual Debt in 1914 ^{2a}	Actual per Capita
Germany	\$339,060,000	\$4,860,000,000	\$72
Italy	249,184,488	2,536,920,000	61
Austria	711,354,000	3,790,800,000	75
France	3,422,800,000 ^{2b}	4,932,900,000	124
Great Britain	10,438,400,000	3,192,448,463	68
Russia	2,136,626,521	4,592,700,000	36
	\$17,297,445,009	\$23,905,768,463	\$65

Inspection of this table reveals that the rough similarity of the theoretical or computed debt to the actual debt is produced by the huge contribution of Great Britain; therefore one is tempted to doubt the accuracy of including such an exceptional figure. It is clear, however, that in the computation the aggregate only is of interest, because Great Britain incurred financial burdens which other nations obviously must have contracted and carried in order to oppose France had Britain not done so. It is clear also from this measurement of European indebtedness in terms of the debt of 1816, that although the debts of the earlier period represented in most instances the accumulated expense of long, frequent, and costly conflicts, and although in proportion to wealth and population they formed exceptionally heavy national burdens, the century of peace which followed terminated with all the nations included in this analysis, except Great Britain, bearing much larger

^{2a} Compiled from Whitaker's *Almanac*, 1915.

^{2b} Per capita base includes debt repudiated in 1793.

absolute and per capita indebtedness than would have resulted if the debt had remained in the 1816 proportion. This increase of debt in time of peace, and under conditions seemingly favorable to national economy, reflects the influence of increased national wealth. The national wealth of the six powers in 1914 was as follows:

NATIONAL WEALTH IN 1914 OF THE POWERS AT WAR

Great Britain	\$88,060,000,000 ²⁸
Germany	83,250,000,000 ³⁰
Russia	60,160,000,000 ³⁰
France	59,000,000,000 ³¹
Austria	55,580,000,000 ³⁰
Italy	20,000,000,000 ³¹
Belgium	12,000,000,000 ³⁰
Total	\$378,050,000,000

On the basis of British increase in national resources during the century following 1816, the aggregate wealth of the six nations specified could not have exceeded \$60,000,000,000 at the close of the Napoleonic Wars. Therefore, while a long period of peace was increasing population two and one-half times, and adding more than sixfold increase to national wealth, increase in national indebtedness also doubtless was to be expected. Since the indebtedness of each of the five powers, France, Germany, Austria, Russia, and Italy, was very much larger in 1914 than it was in 1816, and seems never to have been smaller than it was at the earlier date, clearly the indebtedness existing in 1816 has never been repaid.

Compared with the aggregate national wealth of the nations considered, their debt in the year 1914, the final year of peace, was little more than six per cent. Each nation, however, found its obligations persistent, burdensome, and tending to increase. Five of the six nations began the century of peace with relatively small indebtedness; they closed it with aggregate national obligations nearly thirteen times larger than existed in 1816. Hence the rate of increase in debt in these nations seems to have outstripped the rate of increase in national wealth in the proportion of nearly two to one.

In the case of Great Britain, between 1817 and 1837 the huge public debt existing in 1816 was reduced \$300,000,000 by moder-

²⁸ Sir George Paish, in *London Statist.*

³⁰ Crammond.

³¹ National Geographic Society.

ate annual payments. Between 1837 and 1858 some increases occurred; since 1858 there have been small payments each year with a few exceptions. The aggregate of these payments amounts to about one third of the debt owed in 1816. This reduction is equivalent to settling the bills for the campaigns of the Duke of Marlborough, the debts of the Georges, and half the cost of trying to suppress the American Revolution. But after the lapse of a hundred years, a period of almost continuous peace, Great Britain, wealthiest of the nations of Europe, still owes half of the cost of attempting to conquer her rebellious American colonies and *all* of the debt incurred during the long period of Napoleonic Wars.

Inquiry concerning the national indebtedness in 1816 of the six powers now at war thus has resulted in arriving at certain measurements of the increase recorded in 1914, and on the basis of which to consider further increase.

War Debts and Aggregate Indebtedness

The following table is a combination of the table of war debts published in the *London Statist* of October 23, with additional definite flotations reported in the table despatches since that date, but not including the recent French so-called "loan of victory," or the new German loan. From neither of these is the amount realized yet known. They will probably aggregate \$5,500,000,000.

WAR LOANS OF NATIONS AT WAR TO DECEMBER 1, 1915

Country	Aggregate War Loans or Debts ²²	
	National Money £=4.86; mark .238; crown .198; franc, 18 $\frac{1}{2}$; rouble .51; (Custom House standard); Lire .18.)	Dollars
Great Britain	1,232,600,000 £ 430,000,000 £	\$8,077,320,000
Germany	30,000,000,000 Marks	7,140,000,000
Austria-Hungary	550,000,000 £ 257,200,000 £ 2,000,000,000 Crowns	4,308,992,000
France	20,580,000,000 Fr. 425,341,000 Fr.	3,871,940,000
Russia	7,000,000,000 Roubles	3,570,000,000
Italy	3,216,350,000 Lire	620,755,550
Total		\$27,589,007,550

²² *London Statist*, October 23, pp. 182-4, and Cable despatches, London, Nov. 10; Paris, Nov. 15; Vienna, Nov. 16; Berlin, Nov. 20.

The known debts contracted up to the end of 1915 in order to wage the present European War, are thus shown to aggregate more than \$27,000,000,000. Combined with previously existing obligations these grand totals result as follows:

AGGREGATE NATIONAL DEBTS OF NATIONS AT WAR, DECEMBER, 1915

Country	Total Debt	Per Capita
Germany	\$12,135,000,000	\$177
Great Britain	11,269,768,463	242
France	8,776,815,000	220
Russia	8,162,700,000	57 ²³
Austria-Hungary	8,113,792,000	159
Italy	3,115,920,000	87
Belgium	825,518,000	106
	\$52,399,513,463	\$134

These vast obligations now aggregate more than eight times the total indebtedness of the same nations at the close of the Napoleonic Wars. They form, moreover, a slightly larger proportion of the aggregate wealth of the nations concerned than did the total obligations existing in 1816 under the unfavorable conditions of long and exhausting wars.

The per capita indebtedness in 1915 of the United States and of the states combined, is approximately \$45. The per capita national indebtedness of the powers at war was approximately one and a half times that amount before the outbreak of hostilities. As the year 1916 begins per capita indebtedness has advanced to three times that of the per capita American federal and state debts combined, and in Great Britain it is nearly six times the American per capita. This high figure is curiously close to the British maximum debt per capita in 1816, which it already slightly exceeds.

The outpouring of treasure by Great Britain in 1816 must have astonished alike allies and adversaries during the Napoleonic Wars. If we interpret present British war costs aright the same national traits that controlled England in the wars against Napoleon, that contracted unprecedented debt and never yielded through twenty-three years of contest, are being again clearly manifested in the present war.

²³ Basis of population of Russia in Europe.

The Resources of Nations at War

At the close of the Napoleonic period indebtedness was expressed, with one exception, in millions of dollars. In our own period, a century later, growth in population and wealth compelled financial operations on an unprecedented scale, and public debt is now expressed in every case in terms of billions. In public operations the use of this unit is likely to become more and more frequent. One is already tempted to advance in grand totals to the next unit of value and speak in fractions of trillions. Indeed, as the wealth of the world now approximates a trillion of dollars, the serious use of that unit by our children or grand-children may be in sight.

Comment of this character is useful principally to illustrate how unreliable and unsatisfactory must be all analysis dealing with aggregations of national wealth when several important nations are engaged at the same time in vast financial operations. Any simultaneous efforts by the powers now at war to raise great additional loans because national wealth still looms large are likely to develop the illusory character of national wealth as a cash asset. The attempt of the world, for example, to realize on its trillion of dollars of wealth would result in utter confusion. In short, the effort of all the great powers of Europe to float large additional loans based on huge aggregate resources will tend to depress such resources, though perhaps temporarily, toward paper values only. The real and permanent value of national wealth obviously depends upon the facilities such wealth affords to create more wealth. The great nations now at war are not only destroying national wealth, but, even while they endeavor to realize on their own, they are impairing wealth producing activities.

Of what present value to Germany are her hundred million's worth of ships idle in American ports, or her world commerce temporarily wiped out, or to Germany, France, and England the closed factory while skilled operatives are at the front, many never to return?

The extreme to which the demands of war have already invaded the private affairs and industries of the nations concerned is illustrated by the increasing control exercised in England over exports. All goods to be shipped to American purchasers are now delayed to permit thorough search in order that nothing of use to the British government may leave the kingdom. Fine fabrics,

for example, when at length passed, are billed under the stamped legend, "Not available for aeroplanes or war use."

In short, the conclusion seems justified that the great powers at war, after a year and a half of hostilities conducted on a scale of unprecedented expense, have nearly reached the end of large cash loans from reserve resources and free money, and must hereafter depend more and more on what we may term a hand to mouth support, that is, the appropriation of a large share of the current earnings of the people. This statement is substantiated by the mystery surrounding the amounts realized from the recent French and German loans.

The expenditure, if maintained at the present rate, will be such that even the appropriation of much of the current income is not likely long to suffice, so that after two years of such colossal outlay signs of exhaustion must appear.

This does not imply compulsion to suspend hostilities. It might mean that initial extravagance would be succeeded ultimately by more old fashioned and less costly forms of war.³⁴

This great conflict of all time has been made possible by civilization's perfected system of banking and loans, which thus proves at once a blessing and a curse,—a blessing by enabling nations to finance the defense of rights and territory, a curse by offering perfect machinery for passing on to future generations gigantic burdens greater than the world has known before.

Yet no study of present war costs will be complete which dwells upon the magnitude of expenditure and fails to point out the fact that going nations do not become actually bankrupt. All costs in our time are incurred on such vast scale that national recovery from loss naturally becomes more complicated, but recovery surely awaits every nation which has the capacity to earn it. France offers a convincing example of the truth of this statement. In 1871 she emerged defeated from the war with Germany, prostrate, shorn of provinces, ravaged, bereft of thousands of her strongest, and with even sovereignty dependent upon the payment of a huge indemnity. Yet, forty years later, France rallies to oppose her

³⁴ "Two things seem clear, that the allies are expecting to make their most powerful effort in the early spring, 1916, and that to meet the expected drive the Germans will call up every man available, probably exhausting their reserves. If peace does not come in the interim, the spring campaign will be the most desperate and terrible of the war. And if that gives no decision a slow waning of the war from progressive exhaustion may be expected."—*Springfield [Mass.] Republican*.

ancient enemy stronger in men, resources and wealth than at the earlier period.⁸⁵

If from the present tragedy the people of the nations involved emerge with permanent and helpful readjustments and with courage unimpaired, doubtless national debts and population inequalities, however large, in time can be adjusted.

* France was in fact invaded, had to bear the losses incidental to that state, had to pay as the war went on, a large part of the invaders' cost, and in the end had to pay an indemnity and suffer loss of territory which nearly doubled its losses. The loss of capital and the addition to the national debt are enormous, while several years must elapse before France at the ordinary rate of progress is even at the point of industrial prosperity which she had attained before the war.—Giffen, *Economic Inquiries and Studies*, Vol. I, p. 48.

ECONOMIC COSTS OF WAR—DISCUSSION

GEORGE E. BARNETT: In any consideration of the cost of the war, the first desideratum is to secure clearly defined and useful statistical concepts. In Mr. Rossiter's very interesting paper, as in much of the current discussion, considerable use is made of "national wealth" as a measure of the ability of a country to bear the cost of a war. He compares, for example, national debts and national wealth, aggregate national wealth at the time of the Napoleonic Wars and at present, etc. Such comparisons seem to me to be misleading, whether the question considered is the ability of a nation to finance a war or to bear the burden of a war debt. In both cases the more valuable comparison would be with national income. The proposition that the burden of a war debt is best measured by national income appears to be generally accepted. I shall, therefore, confine my remarks to the question: How far is national wealth an index of ability to finance a war?

There are three methods by which a nation may melt down its wealth into forms suitable for war consumption:

1. It may sell its gold and its holdings of property in other countries. Gold is the only form of goods for which a foreign market is always assured at a fixed price. It would be interesting to know how far the accumulations of gold in the warring countries have been made with a view to monetary effect and how far with a view to the possibility of exchange for goods. There are two limitations on the liquidation of property in other countries. In the first place, there must be purchasers outside the country at war. This involves, of course, that in the buying country there must be available surplus income. The second condition for realizing on this form of national wealth is the ability to secure goods from other countries. The control of the seas has secured for the Allies in this war the power thus to liquidate part of their national wealth. In smaller degree, the Central Powers have been able to secure from contiguous states by the sale of foreign securities supplies and necessities of various kinds.

2. The second method by which a country may turn part of the national wealth to war uses is through the sale to foreign purchasers of rights to wealth within the country at war. The necessary conditions for this form of liquidation are the same as in the preceding case,—foreign purchasers and access to foreign goods. There is also another factor which may be of considerable importance, that is, the familiarity of the foreign purchaser with the property offered for sale. If the selling country has been a lending country before the war, the power

to dispose of such property would be less since the capitalists of other countries would be unfamiliar with the property to be sold. English railroad shares could be sold less readily than the shares of American railroads. The United States could probably realize on a considerable part of its national wealth by sale to capitalists in other countries who have long been accustomed to buy American stocks and bonds.

In both the cases so far considered the possibility of realizing on national wealth has been greatly increased in modern times by the extended use of the corporation as a form of business organization and the establishment of international markets for shares and bonds. But a very great part of the national wealth is not owned by corporations, and for the issues of many corporations there is no established foreign market. A foreign market for such property as land, houses, and small business establishments, which represent a large proportion of the national wealth, could be established only with great difficulty in the midst of war.

3. The third method by which the wealth of a country may be liquidated for war uses is through depreciation. To the extent that capital goods and consumers' goods are not kept up, the wealth which they represent returns to the owner and may be spent on war. This form of liquidation could be carried on entirely without foreign trade. Depreciation, however, has definite limits as a means of reassuming control over wealth and it is inconceivable that any large amount could thus be liquidated without entailing an insufferable loss of national income.

The popularly accepted opinion that it is possible to convert national wealth entirely and immediately into the sinews of war grows out of an analogy with individual wealth. A capitalist can ordinarily convert his wealth into any form he may desire. It is assumed that a nation can similarly convert its wealth. It is obvious, however, that the purchaser can only pay with income or by the sale of other wealth.

From the foregoing considerations, the conclusion may be drawn that the availability of national wealth for war financing depends upon a number of factors: (1) the extent of access to foreign sources of supply; (2) the relative part of the national wealth invested in foreign property; (3) the amount of surplus income in foreign countries;

4. The familiarity of foreign investors with property in the country at war.

These factors vary widely between country and country in any particular war and also between one historical period and another. It seems clear, therefore, that statistics of total national wealth have little importance in any study of war financing.

E. W. KEMMERER: The pictures drawn by Professor Clark and Mr. Rossiter of the economic costs of the war are dark ones. Figures Mr. Rossiter cites from Mr. Crammond,¹ together with the estimates of Leroy-Beaulieu,² and Yves Guyot,³ and the practical certainty of the continuation of the war expenses for some months at least, make it appear that the economic costs of this war will far exceed those of all the European and North American wars of the nineteenth century. However, I do not intend to repaint these pictures in black, but rather to devote the ten minutes at my disposal to the pleasanter task of stating reasons why the pictures are not quite so black as many would have us think.

Living Costs of Soldiers.—The living costs of the twenty to twenty-five million troops in the field, aside from the costs of military supplies and the value of other property destroyed for military purposes, are relatively small as compared with times of peace. Food is simple and is prepared in the most efficient ways. Uniformity and large scale production are the rule everywhere. Soldiers in time of war do not order their meals *à la carte*. Soups are prepared by the thousands of gallons, bread and beans by the ton. Similar practices exist for clothing. In such matters as food and clothing, then, the European battle fields today are vast socialistic camps, the functioning of which the strong pressure of military and financial necessity makes efficient.

Little, moreover, is spent at the front for the luxuries of life, except by a few officers. This for most of the soldiers is a time of austere living. Expensive theaters, banquets, pleasure trips, and the like are not privileges of many mobilized troops. Their pleasures are simple, inexpensive, and quickly improvised.

Economic Conditions of Those Who Stay at Home.—If one turns from the living expenses of the men in the field to those of their families back home he finds a like reduction as measured in the quantities of goods consumed. Most families in belligerent countries are living with a simplicity they have never known before. The bread winner is away and the family income is curtailed. Needs of government, and the feelings of patriotism that a struggle for national existence arouses, instill habits of strict economy. In France and Germany today extravagant living is closely akin to treason. The British authorities

¹ Cf. Edgar Crammond, "The Cost of the War" (with discussion), *Journ. Roy. Stat. Soc.*, May, 1915, pp. 361-413.

² Paul Leroy-Beaulieu, *Recherches économiques sur les Guerres contemporaines*.

³ Yves Guyot, "The Waste of the War and the Trade of Tomorrow," *Nineteenth Century*, Vol. 76 (1914), pp. 1193-1206.

and press are trying to make it so in England. Then, too, in nearly every home the present is a time of great anxiety and of mourning. Anything but simple austere living seems out of place.

Let us now turn to conditions of economic production in Europe away from the battle fields. The first thing to note is that the production of all sorts of army supplies, such as clothing, shoes, etc., is on a much larger scale than in time of peace, and that division of labor and machine production are utilized to the extreme limits of efficiency. When once the painful readjustments incident to the beginning of the war were effected, the cry of unemployment gave way widely to complaints of insufficient labor. Most European labor is today employed, although much of it has been shifted to new pursuits, and in some cases the shift has been effected at the expense of a certain loss of efficiency. In the main, however, it would seem that the shift has been in the direction of greater efficiency on the part of those who have stayed at home. European agriculture, except directly in the war zone, is not materially suffering from the war. Many comforts may be denied those who have stayed at home, the children may be out of school, and the usual family pleasures may be forgotten, but the crops are planted and harvested. The less urgent ordinary vocations and avocations of women, children, and old men are neglected for things of greater immediate economic importance. These people have turned their efforts into field and factory, and are making up for their lack of training and experience by longer hours and less rest days. I was in Switzerland in August, 1914, when the call came for the mobilization of the Swiss troops, and about 500,000 of them went to the frontiers. It was striking to see how the women, children, and old men shifted to the younger men's places and how the important work of the farm went on apparently uninterrupted. Not only man power, but also in many cases horse power, gave way in the fields to woman power, but the crops were gathered promptly and there was little waste.

Psychologists tell us that a rapid metabolism is an efficient metabolism. Many of us do our best work when we are under the strongest pressure; and this is doubtless widely true of the people in belligerent countries today.

War as an Economic Renovator.—Another bright spot in the essentially dark picture of the economic costs of the war is the service that war renders as an economic and social renovator. This war is playing havoc with some bad things as well as with many good things. It is breaking down outworn economic customs, anti-social vested interests, and antiquated methods of production. War clears the decks, as it

were, and in this clearing process there are swept away many things which long since have become obstacles to progress. Many an ugly and antiquated building which has been destroyed by the war will be replaced by a slightly and modern one; many a narrow street will be replaced by a broad one; in like manner the democracy of the trenches will remove many class prejudices to be replaced by stronger bonds of social sympathy between industrial classes. The experience of governments in assuming control of great economic enterprises, as, for example, of the railroads in England, will doubtless afford valuable lessons for the future solution of problems of public regulation and ownership. In this connection it may not be without significance that the largest annual percentage increases in the number of patents issued by the United States Patent Office came immediately after our Civil War.

War Costs Computed in Artificially Depressed Units of Value.—A fact that often gives an exaggerated impression of the economic costs of war is that the monetary units in which war expenses are measured and expressed are usually given, *by war itself*, a subnormal value. In other words we measure our economic costs by a temporarily shortened yard-stick. Various forms of paper money are extensively substituted for gold in general circulation. If this paper is issued in such excess that specie payments are actually or practically suspended, as has been the case in most of our great wars, and appears to be the case in most, if not all, the countries engaged in the present struggle, then prices become the inflated prices of depreciated paper units. But a fact of like significance, although everywhere overlooked, is that the extensive substitution of paper money for gold in general circulation, and the great reduction in the proportions of bank reserves to liabilities, even when they do not result in the suspension of specie payments, nevertheless lead to an abnormal inflation of general prices, i.e., gold prices. Despite the fact that increasing supplies of gold are being piled up in the central bank vaults of the belligerent countries, the percentage of gold to note and deposit liabilities in the banks of Europe is rapidly declining, and the total supply of gold in these countries (including that in banks and in general circulation) is also rapidly falling. Although during the five fiscal years ending June 30, 1914, our gold exports exceeded our imports every year but one, and the average net gold export was 17 million dollars, our net gold imports since January first of the present calendar year have been over 400 million dollars (down to December 1). This is a sum greater than the combined net gold importations of the five previous

fiscal years in American history having the largest net gold importations, and is nearly equal to the world's total gold production in 1913. Such an economy in the use of gold in Europe has an effect on world prices similar to that which would be produced by a temporary doubling of the world's annual gold production. Never in history has any advanced country been so flooded with gold as has the United States during the present calendar year, and the flow of this golden stream to America appears destined to continue for some time. This of course means rising general prices, inasmuch as there has been no proportionate increase in the effective demand for gold. Just as prices as measured in gold rose rapidly in England at the time of the Napoleonic Wars, and in the United States at the time of the Civil War, so gold prices now throughout the world are exhibiting a pronounced upward movement. From July, 1914, to December, 1915, the Economist Index Numbers in England registered an advance of 36 per cent.* On the Continent, it is well known that prices have risen greatly, despite the strenuous efforts of governments to keep them down. For the continental countries, however, since the outbreak of the war, satisfactory price index numbers are not available. In the United States prices have risen rapidly. From July, 1914, to December, 1915, Bradstreet's Index Numbers showed an increased of 23 per cent.

Lest I be misunderstood in my main contention, let me repeat in conclusion that the net economic cost of this war, I believe, will be tremendous; the debit balance will probably be greater than the combined debit balances of all the European and North American wars of the last century; nevertheless the credit items which I have mentioned are very real ones and should not be neglected in any comprehensive statement of the account.

*In the Australian States there has been a great rise in the retail prices of provisions, the index numbers rising, in the various states from 10 to 25 per cent during the period from July, 1914, to May, 1915. Cf. *Monthly Review of the U. S. Bureau of Labor*, December, 1915, p. 45.

ECONOMIC THEORIZING AND SCIENTIFIC PROGRESS

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Since the organization of the American Economic Association thirty years ago, there have been but two of its twenty-five scientific meetings at which one session, at least, has not been devoted to theoretical discussion.

This prominence reflects the continuing interest of American economists in social speculation. The conspicuous place of theoretical papers in journal literature, the considerable proportion of expository treatises among formal publications, are counterparts of the same phenomenon.

The degree of absorption has varied from time to time. In 1880 Cliffe Leslie, echoing Dunbar, summed up the history of American political economy in the sentence "the United States had done nothing towards developing the theory of political economy."¹ The reflex of the animated controversies as to scope and method among English economists of the late seventies and, more notable, the arrival and activity in the United States of a group of German-trained scholars effected a virtual renaissance in American economic thought in the early eighties. The dominant characteristics of the phase were an avowal of the historical-inductive method and an election of concrete problems for study.

The historical movement reached its high-water mark in the United States in the formation of the American Economic Association in 1885. But in this achievement the tendency spent itself. Stirred by militant challenge, heartened by clearness of issue, supplied with convenient channels of publication, the group of thinkers to whom the work of Roscher, Cliffe Leslie, and Ingram seemed amendatory rather than revolutionary, drew to the fore. The impulse took form in the founding of the *Quarterly Journal of Economics* in 1886, with Dunbar's fine inaugural on "The Reaction in Political Economy" sounding the keynote.

The doctrinal controversies of the next half dozen years centered about the contributions of Marshall and Walker. Not since Ricardo's time had such coherent theories of value and distribution been enunciated. The gap which the discrediting of the wage-

¹ "Political Economy in the United States," in *Fortnightly Review*, October, 1880; reprinted in *Essays on Political Economy* (2d ed., Dublin, 1888), p. 128.

fund theory had left was filled by attractive formulae, and recognition of the entrepreneur function and its reward met the demands of modern industrialism.

Marshall's *Economics of Industry* had appeared in 1879 and Walker's *Political Economy* in 1883, without appreciable effect. Now, however, Marshall's election to the chair of political economy vacated by the death of Fawcett called attention to the novel elements in his doctrines; while Walker, aroused by Sidgwick's strictures, reiterated in incisive form the controverted elements of the *Wages Question*. The publication of Marshall's *Principles of Economics* in 1890 marked the climax of the debate. With it and the discussion immediately tributary, a lull was reached in economic controversy.

But the respite was brief. The same year, 1890, in which Marshall's *Principles* was issued, the English translation of Böhm-Bawerk's *Capital and Interest* saw light,—heralded indeed a year before by Bonar's admirable critique of the Austrian school. In quick succession followed Böhm-Bawerk's *Positive Theory of Capital* and Wieser's *Natural Value* in English translation, with Smart's handy *Führer* as a résumé. An outburst of controversial activity ensued, unparalleled in the history of American economic writing. During the nineties this sustained contest—exhibiting every variety of intellectual effort from stimulating analysis to hypercritical dialectic—raged about the Austrian doctrines.

Through sheer exhaustion of disputants—and witnesses—the struggle had abated when in 1899 Clark's *Distribution of Wealth* summarized with rare amenity of form the speculations of a profound philosopher and an inspiring teacher. The effects were wide conversion and ardent discipleship. For a decade Clark's theories dominated economic philosophy in the United States, weakening only with increasing resort to realistic studies and growing uneasiness as to the value of theoretical inquiries.

Walker, Böhm-Bawerk, and Clark thus constitute the major episodes in the thirty years of American economic speculation. There have been minor incidents,—the debate over the scope and method of sociology in 1895-98, the discussion as to the order and form of economic instruction in 1912—but these stand in immediate relation to local or temporary events.

The scientific results attained in the quarter century have not been commensurate with an incessant doctrinal activity. The dev-

otees of a science are notoriously incompetent to pass judgment upon its contemporary phase. There is likely to be either unwarranted depreciation or complacent overestimate. This is as true of the physical as of the social sciences. If, in our own day, Jevons reduced "the mazy and preposterous assumptions" of the Ricardian economics to "the fragments of a shattered science," so, in medical science, Osler has spoken of "an art which is still deep in the sloughs of Empiricism."²

But the depression which many American economists feel as to the present state and tendency of the science is something more than this habitual depreciation. It is born of the conviction that economic science as pursued in the United States has been infected by unsound method, that the productivity of scientific labor has been thereby impaired, and that a further diversion of energy into barren and profitless areas is threatened.

Following the example of the great masters of our science, influenced by the teaching of formal methodologists, American economists who have devoted themselves to economic speculation in the past thirty years have used a dominantly deductive method.

There can be no quarrel with this procedure. It has the advantage of precedent on the part of economists from Dugald Stewart to Alfred Marshall; of approval on the part of logicians from Archbishop Whewell to Professor Keynes; of successful resistance to methodological attack from Richard Jones to Gustav Schmoller.

The real charge against American economic speculation is not that it has made use of deduction but that it has made use of it wrongly and defectively. The indictment lies, in strict accuracy, not against erroneous method but against imperfect employment. The justice of this criticism can be best tested by projecting the evidence to be reviewed against the background of accepted, even though familiar, opinions as to scientific method.

The material of any positive science is a body of related phenomena subject to uniformity as to identity and sequence. Scientific progress consists in the increasing formulation of such uniformities as hypotheses, in tentative statement of them as theories, and in ultimate demonstration of them as laws.

The orderly procedure whereby this end is sought, we have been

² "The Army Surgeon" in *Asquanimitas* (2d ed., Philadelphia, 1906), p. 112.

taught for years, is the method of science,—not of a science but of *science*. In complete form it consists of three steps: observation, inference, verification. Observation and inference give us hypotheses; verification converts the tentative formulations into theories and ultimately into laws. To those whom the gods elect, the hypothesis comes lightly by intuition or imagination; to coarser clay the way is steep and hard,—by induction from assembled particulars, by deduction from admitted or established generalizations.

Marked differences of opinion—accented sometimes into acrimonious controversy—have developed at intervals as to the relative order and prominence of the several parts of the inferential process. Deductive, inductive, historical, comparative, statistical, mathematical, are terms descriptive of the varying emphasis. The outcome has been virtual agreement that there is a constant alternation of the processes of induction and deduction in the actual conduct of scientific inquiry, and that in this “interlacing” historical experience, comparative elimination, statistical uniformity, and mathematical ratio have part.

Whatever difference of opinion may have prevailed as to the order and emphasis of the several elements in the reasoning stage of scientific speculation, there has always been agreement that the third step, verification, formal and deliberate—“the process of testing, by means of an appeal to facts, the validity of the conclusions already arrived at by a course of deductive reasoning”³—is an indispensable requisite in the transition of an hypothesis into a theory and of a theory into a law. Without it speculation is an intellectual gymnastic not a scientific process. Mill likened the distinction to that which exists between the Aristotelian physics and the Newtonian theory of the heavens.⁴ In our own speech it is the contrast between the political arithmetic of Petty and the statistical studies of Pearson. The chemist, the physicist, the physiologist, venturing to propound a new theory without confirmatory evidence, is discredited as an investigator and laughed out of court as a scientist. If recourse cannot be had to observed facts for verification—as often in certain of the physical sciences, astron-

³Fowler, *The Elements of Inductive Logic* (3d ed., Oxford, 1876), p. 244. So too Dunbar (*Quarterly Journal of Economics*, I, 5): “The verification of results reached by deductive reasoning should call for as patient collecting and as conscientious sifting of facts as any other use of observation.”

⁴*System of Logic* (2d ed., London, 1846), I, 579.

omy and geology—the hypothesis remains hypothesis, plausible, perhaps, but tentative none the less until the disclosure of additional facts by some new instrument of precision, by some abrupt discovery of evidence, affords material for the lacking test. The investigator “makes intellectual keys,” declares a recent writer upon scientific method, “and then tries whether they fit the lock. If the hypothesis does not fit, it is rejected and another is made.”⁵ That the scientific workshop is full of such “discarded keys,” Pearson reminds us, was stated finely even a generation ago by Faraday: “The world little knows how many of the thoughts and theories which have passed through the mind of a scientific investigator have been crushed in silence and secrecy by his own severe criticism and adverse examination; that in the most successful instances not a tenth of the suggestions, the hopes, the wishes, the preliminary conclusions have been realized.”⁶

The question remains whether formal verification—however essential in the physical sciences—be either a possible or a necessary element in economic inquiry. As to the needlessness of formal verification, the implication seems to be that the economic investigator is equipped with such a range of general information that automatically he will reject a hypothesis not in harmony with the facts. This smacks much of the disposition of the uninformed to declare that the frequency distribution of two groups of data is identical because the curves look alike.

The consideration as to the impossibility of formal verification traces back to the contention of Mill⁷ that direct verification in the social sciences is impracticable because of the absence of “previous empirical generalizations” and because of the inability to compare the hypothesis with individual experiments or instances of like circumstance. But Mill was concerned less with the establishment of social uniformities than with the predictions of social theory, and even here he insisted that while direct verification is impossible, there is “an indirect verification, which is scarcely of less value, and which is always practicable,”—the process whereby the conclusion drawn as to the individual case is “verified indirectly, by the verification of other conclusions, drawn in other individual cases from the same laws.” Formal logicians have gone

⁵ J. A. Thomson, *Introduction to Science* (New York [1911]), p. 69.

⁶ Quoted in *The Grammar of Science* (3d ed., London, 1911), p. 32, and by Thomson, *op. cit.*, p. 26.

⁷ *System of Logic*, II, 588-90.

even farther in this process of qualification, without waiving the essential consideration: "Verification is not a distinct mode of proof," Fowler maintains, "but is simply a confirmation of one proof by another, sometimes of a deduction by an induction, sometimes of an induction by a deduction, and finally, sometimes of an induction or deduction by another."⁸ Proof—not any particular mode of proof—is the essential requisite of scientific thought.

All said and done, the consensus of opinion among logicians and scientists may fairly be described as follows: The economy of intellectual effort demands that any hypothesis as to an existing uniformity or a causal relation among a body of facts shall before presentation as a scientific contribution be verified by experiment, by specific instance, or by logical equivalent. If experience be the necessary resort, the mere circumstance that the facts are complex or difficult of access does not relieve the investigator of his responsibility. He must exhaust the possibilities, state frankly what he has done, and qualify his inference accordingly.

We are now prepared to formulate the indictment: Economic speculation in the United States has been marred by the omission, deliberate or unwitting, of verification,—the comparison between the conclusions of reasoning and the results of observation. In so far, it has partaken of the character not of economic theory but of economic theorizing.

In passing to a bill of particulars, the critic suffers the woe of an academic ingrate mingled with the remorse of a doctrinal patricide. The challenged are the *dei majores* among American economists of our generation,—the men whom we delight to honor as scholars and as teachers. If the sword be now raised against them, it is in no spirit of filial impiety but in the sure faith that they who have taught us to forge its strength and to whet its edge will be the first to cry that it be wielded if true cause arise.

From out the mass of theories enunciated by American economists of the present generation I have selected four notable doctrines,—notable in the sense of formal issue, wide diffusion, critical discussion, and doctrinal influence:

- Henry C. Adams's Theory of Constant Returns,
- Simon N. Patten's Theory of Consumption,
- John B. Clark's Theory of Wages,
- E. R. A. Seligman's Theory of Tax Incidence.

⁸ *Elements of Inductive Logic*, p. 249.

Henry C. Adams's theory of constant returns was given full expression in 1887 in a compact monograph, "The Relation of the State to Industrial Action,"⁹ as part answer to the query (p. 54) "Is there any principle according to which industries may be classified so that the statesman can easily determine what lines of business should be brought under the rule of public financiering?" Rejecting the *laissez-faire* device of delay until actual experience of ill, Adams proposed by "the scientific analysis of industrial relations to determine with some degree of accuracy" the nature of this principle. The subsequent argument can be set forth by direct citation (p. 55): "All industries, as it appears to me, fall into three classes, according to the relation that exists between the increment of product which results from a given increment of capital or labor. These may be termed industries of constant returns, industries of diminishing returns, and industries of increasing returns. The first two classes of industries are adequately controlled by competitive action; the third class, on the other hand, requires the superior control of state power."

Then passing specifically to the composition of the first class (p. 55): "All those businesses in which success depends largely on attention to detail, and where the personal element of the laborer is brought prominently into view, fall under this class. For example, the retail business of merchants is subject to the rule here stated. . . . There can, therefore, be no motive for endeavoring to apply the rule of public financiering to businesses of this sort."

Professor Adams has here conformed to the first two stages of scientific reasoning, observation and inference; he has ignored the third, verification. From the days of Ricardo and Senior, industries of diminishing and of increasing returns have been recognized as valid corollaries of the law of diminishing returns and the principle of monopoly gains. The recognition of an intermediate group subject to a law of constant returns and the assignment thereto of the great body of industrial enterprises constituted a distinct hypothesis. However legitimate as a tentative assumption, attained by elimination or deduction, such an hypothesis could be properly set forth as an economic law only after the amplest proof by reference to actual facts,—in this particular case both existent and accessible.

Simon N. Patten's theory of consumption, enunciated in *The*

⁹ *Publications of the American Economic Association, First Series, Vol. I, No. 6.*

*Consumption of Wealth*¹⁰ in 1889, is a bold and courageous venture exhibiting in his most characteristic speculation the form and mode of the author's reasoning process. The starting point is the proposition that (Introduction, v) "while production is determined by consumption; the latter is itself largely modified by the former." The problem is explicitly conceived as (*ib.*) "to bring all those facts into harmonious relations to one another which throw light upon the laws regulating the consumption of wealth." Deduction is elected as the mode of investigation since the data are primary facts of human nature and social organization, and warning is served that the ultimate laws are likely to be obscured by disturbing causes and counter forces.

But the method pursued and the result attained fall short of such formal avowal of plan and purpose. By indulgence in conjectural history, "tracing the past development of man" (p. 9) or going "back to primitive times" (p. 24), by resort to free speculation unchecked by attempted proof, Professor Patten gives us brilliant hypotheses and stimulating conjectures,—but not established principles.

In declaring, as a primary or ultimate law of consumption that (p. 13) "With every increase in the variety of our food, the intensity of pleasure derived from the food must be reduced; so that, when the system becomes accustomed to the new diet, the point of satiety will be reached sooner than was formerly the case," or in stating as the economic, in contrast to the natural, order of consumption that (p. 19) "A man under economic conditions will first choose that article which has the highest ratio of pleasure to pain, and then other articles will be chosen in that order which allows the highest ratios to stand first," there is no trace of that deliberate reference to positive phenomena for verification, amendment, or rejection which constitutes an essential of scientific thought. If the propositions be true, they attest the profound insight, the rare intuition, the fertile imagination, and the signal good-luck of a gifted philosopher. Like Galileo he will have "used method by genius." If the propositions be false they afford new evidence that philosophical accident may not be relied upon to replace logical method, and that ordinary men can hope to rival Galileo only by using the rules which he could neglect.¹¹ To

¹⁰ *Publications of the University of Pennsylvania: Political Economy and Public Law Series*, No. 4 (Philadelphia, 1889).

¹¹ *Cf.* Case, "Scientific Method as a Mental Operation" in *Lectures on the Method of Science* (ed. T. B. Strong, Oxford, 1906), p. 11.

economic science the real injury is the complete uncertainty in which we are left as to whether the propositions are true or false.

John B. Clark's theory that the specific productivity of labor fixes wages embodies the essential concept of the author's economic system,—the doctrine of imputation. With rare intellectual tenacity Professor Clark has here constructed a "homogeneous hypothesis" as to the phenomena of economic distribution, not by reference to such facts, but by large reliance upon the legal concept and social institution of private property. As from the earliest recognition of private property in economic relations, man obtains the full fruit of his exertion as reward, so in the most highly developed industrial society the labor-unit tends to receive as wages an amount equivalent to the value of the product created by "a final unit of social labor."¹²

From the days of Aristotle analogical reasoning has been a recognized mode of inference. The geologist infers the efficient causes of events that happened in the Devonian age from the consequences of particular happenings today. Darwin formulated theories as to variations which might have occurred in unthinkable distant aeons from the particular variations which he observed in his domesticated pigeons and cultivated plants.¹³ But analogy, even though often the only recourse in reasoning from the present to the remote, from the accessible to the inaccessible, can never yield anything more than an hypothesis. Even then the way is beset with peril. "It is a common error," warned Rowland the great investigator, "which young physicists are apt to fall into to obtain a law, a curve, or a mathematical expression for given experimental limits and then to apply it to points outside those limits. This is sometimes called extrapolation. Such a process, unless carefully guarded, ceases to be a reasoning process, and becomes one of pure imagination specially liable to error when the distance is too great."¹⁴

With respect to contemporary social phenomena, the validity of an analogical hypothesis is established not by flawless inference and lucid exposition but by the bare hard test: Is it the simplest theory available for explaining the facts? Like the mechanical hypothesis of modern physical science it fulfills its purpose only

¹² *The Distribution of Wealth* (New York, 1899), p. 168.

¹³ Thomson, *op. cit.*, pp. 58-59.

¹⁴ "The Highest Aim of the Physicist" in *Johns Hopkins University Circular*, March, 1900, p. 19.

when its "conjectural attributes explain in the simplest and most plausible way the largest body of known phenomena and when they anticipate phenomena afterwards observed."¹⁵ The theory of specific productivity was propounded void of any such test. How signal was the omission is suggested by the brilliant attempt of an accomplished disciple eleven years later to repair the defect.

Professor E. R. A. Seligman's theory of the incidence of taxation, as presented in 1892 and revised in the successive editions of *The Shifting and Incidence of Taxation* in 1899 and 1910, may reasonably be described as the most ambitious attempt at economic deduction made by an American scholar of our generation. Prefaced by an imposing historical review of the literature of the subject—past and present, deliberate and incidental, domestic and imported—the essay should be free from at least the fundamental errors of method which the author's profound erudition and critical acumen have detected so unerringly in the writings of others.

If Ricardo's doctrine of incidence, "called *par excellence* the absolute theory," be incomplete in failing (p. 151) "to notice the practical effects of economic friction," with the result that (*ib.*) "It might, perhaps, be true so far as it went, but it would even then not go far enough to explain actual phenomena," the theory which is to replace it should certainly escape the same pitfall of defective method. Yet in this respect—the failure to submit conclusions to verification and test—Professor Seligman's analyses are glaringly Ricardian. His assumptions, it is true, are not the few simple premises of Ricardo, but a body of empirical generalizations that incorporate certain of the characteristics of the modern industrial system. But his conclusions are none the less unverified hypotheses.

Here and there detached facts are cited in illustration. Where "a careful statistical investigation" (p. 334), "a more recent inductive verification" (*ib.*), "a more recent investigation" (p. 335), are conveniently at hand—as in the case of the taxation of mortgages—the results are used to test the conclusion. But beyond this, and occasional bibliographical references to (p. 372) "inductive statistical studies" of the incidence of other taxes, there is no attempt to establish the validity of hypotheses by appeal to facts. The author, fully alive to the purpose of such procedure, seems to feel himself absolved by the adequacy of his premises, the certainty of his inferences, the guarded application of his conclusions, from

¹⁵ L. T. More, *The Limitations of Science* (New York, 1915), pp. 15, 27.

the necessity of undergoing the drudgery and detail that verification involves.

Grave as has been the direct harm to the progress of economic science by faulty method, the larger injury has been the unwholesome influence exerted by example upon students, devotees, and disciples. This has taken the form of (1) the encouragement of commentation, (2) the vogue of text-book writing, (3) the tolerance of metaphysical controversy as to final terms and ultimate concepts.

1. Historians of scientific thought describe as "the commentatorial spirit" that disposition among scholars to lean on the authority of earlier thinkers, "to study the opinions of others as the only mode of forming their own; to read nature through books; to attend to what had been already thought and said, rather than to what really is and happens." This "reign of mere disputation"¹⁶ has been recurrent in the history of thought, and always with unfortunate result. "The wavering abstractions, indistinct generalizations, and loose classifications of common language," records Whewell, were "the only source from which the schoolmen of the Middle Ages drew their views, or rather their arguments: and though these notional and verbal relations were invested with a most complex and pedantic technicality, they did not, on that account, become at all more precise as notions or most likely to lead to a single real truth. Instead of acquiring distinct ideas, they multiplied abstract terms; instead of real generalizations, they had recourse to verbal distinctions. The whole course of their employments tended to make them, not only ignorant of physical truth, but incapable of conceiving its nature."¹⁷

A kindred mode of intellectual activity has engaged American economists of our own generation to a very considerable extent. It has given us that "scientific snobbishness" which M. Poincaré warns us, "is so easy to gull by its novelties."¹⁸ It has exalted smartness and hypercriticism at the expense of scientific industry. It has constituted a mischievous concept, "the economic theorist" or the specialist in economic theory,—a superior breed of economist who looks upon positive inquiry much as the late Professor Clifford regarded sociology, as "all about papa and mama, clothes, houses, shops, policemen, half pence and such like."¹⁹ It

¹⁶ Whewell, *History of the Inductive Sciences* (London, 1837), I, 264.

¹⁷ *Ibid.*, p. 322.

¹⁸ *Dernières Pensées* (Paris, 1913), p. 241.

¹⁹ *Lectures and Essays* (London, 1886), p. 435.

has countenanced a mode of scientific participation wherein the economic fledgling, instead of serving the hard apprenticeship of observation, investigation, description, and empirical generalization, attempts the short-cut to scientific eminence by laying hold of the latest contribution to economic speculation, mulling and pawing over it by what Pearson has termed "some obscure process of internal cogitation," and emerging with "a paper on theory," with rejoinder and counter reply to follow.

2. Since 1885 there have been published in the United States nearly thirty textbooks on political economy. The text-writing habit of American economists is in part capable of materialistic interpretation,—the problem of undergraduate teaching and the pressure of enterprising publishers. In so far as an economic treatise is an exposition—in manner suited to student or reader needs—of the prevailing state of the science, with such further addition of amendment as the independent labors of the author have contributed, it serves a valid scientific end.

This ceases to be the case when the textbook becomes either a mere stylistic paraphrase or a device for incorporating untested hypotheses into the body of economic theory. The state of mind wherein the economist as teacher finds it essential, as evidence of intellectual autonomy, to prepare a textbook of his own composition, much as the economic departments of the last decade deemed it important to establish institutional journals, is of course unfortunate. But at worst this is prodigal waste of a scholar's energy. Far more serious in its scientific consequence is it for the textbook to be exploited in the exposition of scientifically incomplete theories. With the manual become in so far treatise, demanding that every new element undergo the hard rigorous test of scientific method, that gaps be neither evaded nor glossed but remain gaps until properly bridged,—substitution of hypotheses for theories, of assumption for proof, is a mischievous, because a masked, lapse.

3. It is no new thing for economists to engage in controversy as to final terms and in speculation as to ultimate concepts. The historic Political Economy Club discussed "the proper signification of the word Demand." John Stuart Mill rated as "an unsettled question of political economy" the correct meaning to be attached to "the words productive and unproductive." Malthus wrote a book on "Definitions in Political Economy," and appended a set of them. The last months of Ricardo's life were absorbed in

animated controversy as to the measure of value, and there is at least Maria Edgeworth's story of the gentleman who, when asked if he would be of the Political Economy Club, answered that he would "whenever he could find two members of it that agree on any one point."

There are two motives which may lead the economist to such activity. The first is the desire of the investigator to amend or revise an accepted term or concept by incorporating the tested result of his own research. It is the manner in which the progress of a science is registered. Its characteristics are caution, restraint, and abundant evidence. Of this kind were Ricardo's correction of Gresham's law and Walker's disassociation of the captain of industry.

Very different is the impulse to debate terms and to discuss postulates in a spirit of logical disputation and metaphysical refinement, as exemplified in so much American economic writing. If there be reluctance in accepting as "an axiom in modern thought" that "the hope of discovering the laws of nature and our relation to them by metaphysical reasoning is impossible,"²⁰ there is surely agreement that this is not the initial task of the investigator. The physicist debates the constitution of energy, the chemist discusses the composition of matter, the biologist argues the origin of life; but none of these as the economist theorizes over, let us say, the nature of value. Historical equipment, intellectual maturity, inductive experience must be possessed by the natural scientist in the very highest degree before he attempts to grapple with the ultimate concepts of his field of study. "What is matter; what is gravitation"; asked Rowland, "what is ether and the radiation through it; what is electricity and magnetism; how are these connected together and what is their relation to heat? These are the greater problems of the universe. But many infinitely smaller problems we must attack and solve before we can even guess at the solution of the greater ones."²¹ Even then, the physicist does so in face of a growing protest. An acute critic of modern scientific tendencies, after lamenting that "many men of science have forgotten the distinctions between the creations of nature and the creations of their imagination," and insisting that "the question may well be asked, whether physical science has not outgrown a method proper for the alchemist and the astrologer," has attempted to draw "a definite

²⁰ More, *op. cit.*, p. 1.

²¹ *Op. cit.*, p. 17.

boundary line between the regions of physics and metaphysics" by saying that "the domain of physics is concerned with the discovery of phenomena and the formulation of natural laws based on postulates which are determined by experience and generally accepted as true; the causes of phenomena and the discussion of the postulates of science lie in the province of the metaphysician."²²

The distinction is too instructive to be lost. The term "metapolitics" to describe "an investigation of the speculative basis of political doctrines" is as old as De Lolme and Coleridge. So too, a "meta-chemistry," dealing with "the chemistry of the supersensible," and a "meta-physiology," concerned with the "principles outside of and higher than those of physiology and the material organism."²³ The Oxford Dictionary indeed countenances "the practice of prefixing 'meta-' to the name of a science, to form a designation for a higher science (actual or hypothetical) of the same nature but dealing with ulterior and more fundamental problems." Let there be, in like manner, a "meta-economics" concerned with the economics of the supersensible. Since we must theorize, let us, with Sir Lucius, preserve "the genteel attitude into the bargain."

This constitutes no denial of the ultimate possibility, and the eminent desirability, of a theoretical economics. Hans Driesch prefaced his Gifford Lectures on *The Science and Philosophy of the Organism*²⁴ with the frank admission that (p. 3), "One may be a first-rate organic chemist even when looking upon the atoms as small billiard balls, and one may make brilliant discoveries about the behavior of animals even when regarding them in the most anthropomorphic manner—granted that one is a good observer; but it can hardly be admitted that our chemist would do much to advance the theory of matter, or our biologist to solve the problem of the relations between body and mind."

The economist may proceed farther and agree in paraphrase that (p. 4), "only by becoming a true philosophy of nature are social sciences of all sorts able to contribute to the highest questions which man's spirit of inquiry can suggest." But having gone so far the economist must continue at equal pace with the biologist and insist that, a "naïve" science becomes a philosophical speculation by transition, not by replacement; that (p. 5) "we perhaps

²² More, *op. cit.*, pp. 17, 30, 113-14.

²³ Oxford Dictionary, *sub nom.*

²⁴ *Aberdeen University Studies*, No. 33, Vol. I (Aberdeen, 1908).

shall be able to understand what its part may be in solving what can be solved," and that (p. 4) "The beginning of a long series of studies is not the right place to decide this important question."

If there be substantial truth in the foregoing, the moral to be drawn is neither methodological formulae nor an "advice to young economists," but a larger scientific consciousness. The best remedy for a half-science, Poincaré insists, is more science.²⁵ The political economist can not with impunity continue to neglect an essential process in scientific inquiry. So long as he does he must be prepared to face the biting query that the critic of the speculative tendency in physical science, to whom I have already referred, has propounded: "Is it any wonder that a gulf is growing not only between men of science and the rest of the world, but also between theorists and those who are still willing to submit their imagination to experience? Such a gulf is certain to continue so long as theorists are willing, and even anxious to ignore common sense and the facts gained by patient and exact experimentation."²⁶

Some realization of this danger has come. "My last book on economics was a failure," Professor Patten cheerfully recorded in 1912, "and having realized this I resolved to write no more books on economic theory until I could see some attainable goal."²⁷ On the other hand, the labors of a growing body of American economists—Taussig upon international trade, Ripley upon railway transportation, Kemmerer and Fisher upon prices, Moore and Barnett upon wages, Mitchell and Persons upon crises, T. S. Adams and Plehn upon taxation—to single out but a few—point to acceptance, conscious or unconscious, of Pearson's dictum that although the discovery of law is the peculiar function of the creative imagination, yet this imagination has to be a disciplined one. "It has in the first place to appreciate the whole range of facts, which require to be resumed in a single statement; and then when the law is reached—often by what seems solely the inspired imagination of genius—it must be tested and criticised by its discoverer in every conceivable way, till he is certain that the imagination has not played him false, and that his law is in real agreement with the whole group of phenomena which it resumes."²⁸

²⁵ *Dernières Pensées*, p. 241.

²⁶ More, *op. cit.*, p. 112.

²⁷ *The Reconstruction of Economic Theory*, p. 1.

²⁸ *The Grammar of Science*, p. 31.

The output till now is not large; but it is only in this wise that knowledge grows. In science as in affairs, "the recognition of our ignorance is the surest way to get rid of it."²⁹ Professor Clifford's modest dream of "the good time coming" in natural science was "when also benevolent old ladies may be expected to know one end of a guinea-pig from the other."³⁰ A generation ago Cliffe Leslie ventured, more hopefully, that America would take an active part in bringing to light and in solving those "new economic problems" which the chief economists of both worlds have never yet raised, and of which they have not dreamt.³¹ If the coming years are to bring us nearer to that still remote goal, it must be by unrelenting regard to Huxley's classic warning: "Whenever science has halted or strayed from the right path, it has been, either because its votaries have been content with mere unverified or unverifiable speculation; or it has been, because the accumulation of details of observation has for a time excluded speculation."³²

²⁹ Clifford, *Lectures and Essays*, p. 96.

³⁰ *Ibid.*, p. 423.

³¹ *Essays in Political Economy*, p. 154.

³² "The Progress of Science, 1837-1887," in *Methods and Results: Essays* (New York, 1898), pp. 64-65.

THE ROLE OF MONEY IN ECONOMIC THEORY

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Among recent tendencies in economic theory none seems to me more promising than the tendency to make the use of money the central feature of economic analysis. What forms, tacit and explicit, this tendency assumes, and what future work it suggests are my chief themes. But the significance of recent developments will stand out more clearly if I recall the curious rôle played by money in the parent stock from which our current types of economic theory are descended.

I

"The science of Political Economy as we have it in England," wrote Bagehot, "may be defined as the science of business, such as business is in large productive and trading communities. . . . It assumes the principal facts which make that commerce possible . . . : free laborers working for money wages, capitalist employers in quest of money profits, a highly developed monetary system with a loan fund and a speculation fund—in short, the whole set of pecuniary institutions under which the "general art of money-making has grown up." "It assumes that every man who makes anything, makes it for money. . . ." Finally, it assumes the sort of human nature appropriate to money-makers. "Dealing with matters of 'business,' it assumes that man is animated only by motives of business."¹ Or, as Dr. Marshall phrased it, the classical economists worked out "their theories on the tacit supposition that the world was made up of city men."²

There are no better accredited interpreters of classical political economy than Bagehot and Marshall. Yet these tacit assumptions which they impute to the classical writers seem at variance with the explicit statements about money found in the classical texts. Mill puts the matter most clearly. He holds the use of money to be a superficial phenomenon, one which often "obscures, to an unpracticed apprehension, the true character of" economic processes.³ He discusses production, distribution, and even ex-

¹ "The Postulates of English Political Economy." Bagehot's *Economic Studies*, edited by R. H. Hutton, especially pp. 6, 7.

² *Principles of Economics*, 1st ed., p. 62.

³ *Principles of Political Economy*, Ashley's ed., p. 72.

change, "without introducing the idea of Money (except occasionally for illustration)." When he does "superadd that idea," he admits that without "a Circulating Medium" we should suffer two great inconveniences:—"the want of a common measure for values," and inability to carry the division of labor to any considerable extent.⁴ But, "Great as the difference would be between a country with money, and a country wholly without it, it would be only one of convenience."⁵ For, "The introduction of money does not interfere with the operation of any of the Laws of Value laid down in the . . . chapters" written before the idea of money was superadded.⁶ And the like holds of distribution. Money makes no difference in the law of wages or the law of rent. "Wages and Rent being thus regulated by the same principles, when paid in money, as they would be if apportioned in kind, it follows that Profits are so likewise."⁷ "There cannot, in short, be intrinsically a more insignificant thing, in the economy of society, than money, except in the character of a contrivance for sparing time and labour."⁸

Political Economy, then, is the science of business, and economic men are money-makers; nevertheless, the use of money is a fact of no importance for economic theory. This seeming contradiction between the letter of the economic law and its spirit as interpreted by loyal commentators long passed without notice.⁹ It was part of the classical tradition to accept both of these views, and not to think of them at the same time.¹⁰

⁴ Pp. 483, 484. It would be going too far to credit Mill with a full appreciation of all that lies latent in his admission that without money we should lack "a common measure for values."

⁵ P. 6.

⁶ P. 488.

⁷ Pp. 688, 691.

⁸ P. 488.

⁹ I have not scrupled to set Mill's clear statements about the insignificance of money against Bagehot's and Marshall's interpretations of classical economics, although both of the latter were probably thinking of Ricardo rather than of Mill. As Professor J. M. Keynes remarks, "Bagehot kicked morally and intellectually against the Mill despotism, just as Jevons did. The same feeling, far less intense, is to be found in some of the criticisms of Dr. Marshall." (*The Works of Walter Bagehot*, *Economic Journal*, September, 1915, XXV, 375). In the point at issue, however, it seems to me that Mill was merely formulating lucidly the tacit views of his predecessors.

¹⁰ So far as I know, the first writer to raise the issue in any form was Professor F. von Wieser. In the preface of his *Natural Value* (1888, English translation, 1893, pp. xxvii-xxix) he pointed out the confusion between the

II

When Jevons "shunted the car of Economic science" to another track, he pushed the use of money farther into the background. This result followed from his explicit avowal of hedonism as the basis of economic theory. The "ultimate quantities which we treat in Economics," he holds, "are Pleasures and Pains."¹¹ "But it is convenient to transfer our attention as soon as possible to the physical objects or actions which are the source to us of pleasures and pains."¹² Accordingly, he develops his theory of exchange without consciously introducing the use of money.¹³ His "trading bodies" are engaged in barter,—swapping corn for beef. No man of his generation knew more about money and the mechanism of exchange than Jevons, and no man con-

"philosophical" theory of value and the "empirical" theory of price in Adam Smith and Ricardo. Professor A. C. Whitaker has worked out this theme fully in his *History and Criticism of the Labor Theory of Value in English Political Economy* (Columbia Studies in History, Economics and Public Law, vol. xix, no. 2), New York, 1904. The result of these inquiries is a detailed demonstration that the classical writers from Adam Smith to Cairnes did not succeed in resolving all items of "entrepreneur's cost" into "labor cost"—that is, they did not really get rid of pecuniary factors in their theory of exchange.

It has indeed become more difficult to understand than to criticise the classical attitude toward the use of money. One clue to it is given by Professor Thorstein Veblen ("The Preconceptions of Economic Science, II," *Quarterly Journal of Economics*, July, 1899; XIII, 411-26). Veblen lays stress upon the hedonistic conception of human nature which the classical writers held tacitly, either as professed disciples of Bentham or as sharers in the common sense of their day. This preconception shifted the center of interest in economics away from Adam Smith's concern with the bearings of industry upon the community's material welfare to Ricardo's problem of value and distribution. To conceive economic behavior as concerned primarily with buying and selling commodities, or with getting wages, rent, and profits was to emphasize the pecuniary side of life. Hence the legitimacy of Bagehot's interpretation of "English Political Economy" as "the science of business." But on the hedonistic basis money was a mere symbol:—nothing really counted in controlling behavior but pleasures and pains. Hence Mill's confident assertions about the insignificance of money. A hedonist could admit no fundamental inconsistency between the hedonic and the pecuniary calculus, though he might admit that the pain cost of a day's labor to a skilled man stood for more money than the corresponding pain cost to an unskilled man, and so need to supplement his "philosophy" of value by an "empirical" theory of prices.

¹¹ *Theory of Political Economy*, 4th ed., p. 65.

¹² P. 37.

¹³ That his exposition does logically involve the existence of a general medium of exchange has been shown by Professor Allyn A. Young. "Jevons' Theory of Political Economy," *American Economic Review*, September, 1912, II, 584.

tributed more to our knowledge of price fluctuations. But he believed heartily in the subdivision of economic studies.¹⁴ Among the fundamentals of economic theory—that is, in “the mechanics of utility”—he saw no place for money. It belonged among “the higher complications of the subject,” into which his great treatise did not enter.¹⁵

For the “motives of business” which Bagehot found dominating classical economics then, Jevons substituted the striving for pleasure. Granted the validity of hedonism, his way of conceiving economic behavior was a great advance. Economic theory became more profound in that it dealt directly with ultimate motives, or with the physical objects and actions that evoked them. Human nature itself became simple enough to let the economist use the powerful methods of analysis provided by mathematics. The hypothesis “that Pleasure is the concomitant of Energy,” and the “conception of Man as a pleasure Machine” promised to elevate social mechanics to a throne beside celestial mechanics.¹⁶ Further, the economist’s explanation of why things happen, his statements of what does happen, and his criterion of what ought to happen, were all established upon a single harmonious basis. Economics led directly to ethics; no radical shifting of the viewpoint was required.¹⁷ To this admirable simplicity the conception added admirable practicality. On the hedonistic basis, “the materials with which exact social science is concerned are no metaphysical shadows, but the very substance of modern civilization, destined, doubtless ere long to become embodied in practical politics and morals.”¹⁸

It is curious that this splendid vision, set forth with such precision and such eloquence by Professor Edgeworth, induced few of the economists who followed Jevons’ line of attack to accept his explicit hedonism. Most of them worked with the concept of marginal utility—a notion less adapted to mathematical analysis than final degree of utility, but better adapted to popular exposition.¹⁹ That is, they built, usually at the first remove, upon

¹⁴ Preface to the 2nd ed. of the *Theory of Political Economy*; pp. xvi-xviii of the 4th ed.

¹⁵ See the last paragraph of the program sketched by Jevons in 1862, published in 1866, and republished in the 4th ed. of his *Theory*, p. 314.

¹⁶ Professor F. Y. Edgeworth, *Mathematical Psychics*, 1881, pp. 9-13.

¹⁷ *Ibid.*, p. 56.

¹⁸ *Ibid.*, p. 97.

¹⁹ Compare Professor A. A. Young, “Jevons’ ‘Theory of Political Economy,’” *American Economic Review*, Sept., 1912, II, 583.

Menger, and Menger did not build upon Bentham. Likewise, those who were especially influenced by Professor John B. Clark did not find the word "hedonism" in *The Philosophy of Wealth*. As for the mathematical economists, they found in Walras a better master than Jevons, one who formulated the problem of exchange in all its generality, and Walras had no more to say of hedonism than Menger or Clark. Hedonistic preconceptions may have been tacitly held by these masters; they were not explicitly avowed.

To the example of reticence concerning the basis of choice set by Menger, Walras, and Clark, there was added in the late eighties and the early nineties a series of warnings from men who cultivated the borderland between economics and philosophy. Professors James Bonar, J. S. Mackenzie, and, most thoroughly, H. W. Stuart called the attention of economists to the passing of hedonism in psychology, and raised the question whether the whole utility analysis fell with it.²⁰ That ticklish question was little debated by mere economists for the next decade,²¹ but they did seek anxiously to free their terminology from hedonistic implications. In 1892 Professor Irving Fisher protested against the foisting of (hedonistic) psychology upon economics by Gossen, Jevons, and Edgeworth as inappropriate and vicious, and held that utility might be derived from desire, whether the antecedent of desire was pleasure, duty, fear, or any other state of consciousness.²² In the later editions of his *Principles*, Dr. Marshall changed utility "or pleasure" to utility "or benefit," defined consumer's rent as "surplus satisfaction" instead of "surplus pleasure," dropped his reference to Bentham's treatment of the propinquity and certainty of

²⁰ James Bonar, "The Austrian Economists and their View of Value," *Quarterly Journal of Economics*, Oct., 1888, III, 24, 25; extract from a paper on the "Relations of Carlyle to Political Economy" (Dec., 1890) published in *Philosophy and Political Economy*, 1893, (2d. ed., p. 236); John S. Mackenzie, *An Introduction to Social Philosophy*, 2d ed., 1893, pp. 267, 268; Henry W. Stuart, "Hedonistic Interpretation of Subjective Value," and "Subjective and Exchange Value," *Journal of Political Economy*, December, 1895, March and June, 1896, III, 64-84, and IV, 208-39, 352-85.

²¹ Professor H. J. Davenport was among the first to take up this issue. See his "Proposed Modifications in Austrian Theory and Terminology," *Quarterly Journal of Economics*, May, 1902, XVI, 355-58; *Value and Distribution*, 1908; pp. 303-11; *Economics of Enterprise*, 1913, pp. 97-102. See also Professor A. C. Pigou, "Some Remarks on Utility," *Economic Journal*, March, 1903; XIII, 66-68.

²² *Mathematical Investigations in the Theory of Value and Prices*, pp. 5, 11, 23.

pleasures, and inserted a note contesting "the belief that economists are adherents of the philosophical system of Hedonism or of Utilitarianism."²³ Such efforts to free economics from its entangling alliance were spurred on by critics—above all Professor Veblen—who urged that the substance of hedonism remains in marginal theory even after its semblance is dropped.²⁴ Though scant public notice was taken of these criticisms,²⁵ they contributed toward the feeling of uneasiness about the psychological basis of economics that is so marked at present. If hedonism is dropped what shall take its place? Or can economics dispense with psychology altogether?

III

Since the ostensible dropping of hedonism began, three fairly distinct types of orthodox economic theory have been developed by the psychological school, the pure theorists, and the neo-classicists.

The name "American Psychological School" was invented, I believe, by Professor Fetter. His *Principles of Economics* (1904) is the best example of this type of theory for present purposes, because it surveys "the whole range of economic inquiry" in brief compass;²⁶ and because it has such aesthetic simplicity. This simplicity is attained by resolving all branches of economic theory into problems of value. The value of material things,—present goods and durable goods—the value of human services, and the social aspects of value include the whole field. Further, all these

²³ As examples of such modifications in his phraseology, compare the following parallel passages in the first and sixth eds. (1890 and 1910) pp. 83, 84 note with p. 17 note; pp. 187, 188 with p. 141; pp. 153, 154 with pp. 119, 120; p. 175 with p. 124; p. 156 with pp. 117, 118; similarly in the second (1891) and sixth eds., compare p. 150 with p. 93, and p. 153 with p. 93.

²⁴ Thorstein Veblen, "Why is Economics not an Evolutionary Science?" *Quarterly Journal of Economics*, July, 1898; "The Preconceptions of Economic Science," *ibid.*, January and July, 1899, and February, 1900; "Professor Clark's Economics," *ibid.*, February, 1908; "Fisher's 'Capital and Income,'" *Political Science Quarterly*, March, 1908; "Fisher's 'The Rate of Interest,'" *ibid.*, June, 1909; "The Limitations of Marginal Utility," *Journal of Political Economy*, November, 1909, XVII, 620-36.

²⁵ By way of exception, see Professor Irving Fisher's reply to Professor Veblen, "Capital and Interest," *Political Science Quarterly*, September, 1909; and Böhm-Bawerk's note on the subject, *Positive Theorie des Kapitals*, 3d ed., 3d half volume, pp. 310-21.

²⁶ P. 413.

value problems are treated in terms of a single unit, "the simplest, immediate, temporary gratification."²⁷ Since "the attainment of pleasurable conditions in mind or soul . . . is the aim of all economic activity,"²⁸ the economist must carry all his analyses back from money to goods, and from goods to the psychic income which goods yield. "All things at last become comparable in terms of psychic income in each individual's judgment . . ."²⁹

Now this "consistently subjective analysis of the relations of goods to wants,"³⁰ which Professor Fetter manages so deftly, has received two interpretations. First, it has been taken as what it purports to be—a psychological theory of economic behavior. The gist of the criticism on this reading is that the theory misrepresents the process of valuation. The assumption that men value goods as instruments for arousing certain feelings logically involves the following steps: the kind and magnitude of the feelings that given goods in given quantities presumably will arouse in a given person must be separated in his mind from other elements in his ideas of the goods; then these feelings must be valued and discounted according to their presumed futurities; finally the values set on the feelings must be passed back again to the goods. A generation that has lost faith in hedonism cannot accept such an analysis as psychologically valid. Men do not practice psychic book-keeping in terms of "the simplest, immediate, temporary gratification." They value goods, not feelings.³¹

The second interpretation is that the American psychological school has turned political economy into "business economics," "a system of economic accounting," "pecuniary logic."³² It has taken

²⁷ Pp. XIV, 73, 413. Cost, of course, even psychic cost, is not recognized as coördinate in importance with gratification in determining value. See pp. 273, 274.

²⁸ P. 43.

²⁹ P. 225.

³⁰ P. XIV.

³¹ For examples of such criticisms of the psychological school see Professor Veblen's reviews of Professor Fisher's *Capital and Income* and *The Rate of Interest*, *Political Science Quarterly*, March, 1908, and June, 1909; Professor A. S. Johnson's review of the last edition of Böhm-Bawerk's *Kapital und Kapitalzins*, *American Economic Review*, March, 1914.

³² John R. Commons, "Political Economy and Business Economy: Comments on Fisher's *Capital and Income*," *Quarterly Journal of Economics*, November, 1907; A. S. Johnson's review of Fisher's *Elementary Principles of Economics*, *Journal of Political Economy*, November, 1913; W. C. Mitchell's review of Davenport's *Economics of Enterprise*, *American Economic Review*, September, 1914.

the habit of mind developed by business traffic, and imputed it to mankind at large in their dealings with goods in general. It has used the refined concepts of wealth, service, property, capital and income—concepts which are slowly elaborated products of the money economy—to frame an account of how men might behave if they were faultless products of the counting-house. "In short, for system's sake," the psychological school has recast "the whole material equipment of human living . . . in molds fashioned after the notions of catallactics," as Professor Young puts it.³³ And in so doing the school has rendered a notable service. For the use of money and the pecuniary way of thinking it begets is a most important factor in the modern situation. To isolate this factor, to show what economic life would be if it dominated human nature, is to clarify our understanding of economic processes. It is regrettable only that these writers have not emphasized the monographic character of their work.

Of these two interpretations the second accords better with the trend of development within the school. Even in 1904 Professor Fetter put three excellent chapters on the evolution of the money economy into his textbook. He pointed out "that the problem of time value was first clearly recognized in connection with money and a formally expressed capital sum." He admitted that the practical men who are "fixing the 'capital value' of goods are usually only dimly conscious of the logical nature of the process."³⁴ Indeed, he seemed on the verge of saying that the pecuniary logic which he was expounding was something that men have learned from business experience and carry back from that objective realm a little way into their psychic life. Professor Fisher in 1909 granted to Professor Commons that his *Capital and Income* dealt only with one side of economic life,³⁵ and then in his textbook in 1912 he gave a more uncompromising pecuniary version of economic behavior than Professor Fetter had done.³⁶ Finally, in 1913, Professor Davenport carried this line of work through to its logical outcome by defining economics as "the science that treats phenomena from the standpoint of price," by accepting completely the "private and acquisitive point of view" in his search for expla-

³³ Allyn A. Young, "Some Limitations of the Value Concept," *Quarterly Journal of Economics*, May, 1911; XXV, 424.

³⁴ The chapters are numbered 13, 14, 15. The quotations are from pp. 142, and 126.

³⁵ "A Reply to Critics," *Quarterly Journal of Economics*, May, 1909.

³⁶ *Elementary Principles of Economics*.

nations, and by distinguishing sharply between that scientific task of explaining and the larger task of passing judgment upon the economic situation as a whole.³⁷

Professor Fetter, indeed, has refused to accept Davenport's "price conception of economics."³⁸ But his new book, published since this paper was drafted, shows that he has shifted his own ground since 1904.³⁹ According to the preface "he presents here a quite new statement of the theory of value, one in accord with the modern volitional psychology, thus eliminating entirely the old utilitarianism and hedonism which have tainted the terms and conceptions of value ever since the days of Bentham. The basis of value is conceived to be the simple act of choice, and not a calculation of utility. Even the phrase 'marginal utility' is definitely abandoned."⁴⁰ As this change is a concession to critics who have charged the psychological school with hedonism, so another change is designed to meet critics who have charged the school with turning political economy into business economics. Without altering substantially his theories of prices and distribution, Professor Fetter now emphasizes the fact that these theories deal, not with economic behavior as such, but with elements logically implicit in economic behavior. And he shows that these logical implications are brought out by the use of money. Hence the pecuniary aspects of economic life get clearer recognition than in Professor Fetter's earlier work. But they are not permitted to cover the whole field. For to his analysis of the process by which business incomes are fixed, Fetter adds a brief discussion of the social aspects of value.⁴¹

³⁷ *Economics of Enterprise*, pp. 25, 517. In his own despite Professor Fetter claims Davenport as a (wayward) member of the American psychological school. See his review, "Davenport's Competitive Economics," *Journal of Political Economy*, June, 1914. Of course Davenport's desire to divorce economics from psychology (see pp. 97-102, 230-32) is no reason for counting him out of the school. Professor Fisher is a member of unquestioned standing, and, as noted above, he protested from the start against "the foisting of psychology upon economics." Similarly, Professor F. von Wieser ranks himself in the psychological school, though he disclaims dependence upon psychology proper. See his new *Theorie der gesellschaftlichen Wirtschaft*, in *Grundriss der Sozialökonomik*, Vol. I, 1914, p. 132.

³⁸ See his article referred to in the preceding note.

³⁹ *Economics*, Volume I, *Economic Principles*, New York, September, 1915.

⁴⁰ P. ix.

⁴¹ With reference to the place of this topic in economics, the difference between Davenport and Fetter seems to be important only from the terminologi-

The "psychological" type of theory, then, has brought money back into the very center of economics. From the use of money is derived not only the whole set of pecuniary concepts which the theorist and his subjects employ, but also the whole counting-house attitude toward economic activities. In its use are found the molds of economic rationality, and the clues to economic explanations.

IV

While the psychological school has been developing its pecuniary logic, certain pure theorists have sought another way of emancipating themselves from hedonism. The leader of this diversion is Professor Vilfredo Pareto.

As his disciple, M. Zawadzki says, Pareto employed the hedonistic hypothesis in his earlier work. But since 1900 he has developed "a new theory, which he calls the theory of choice, a theory which may replace the hedonistic hypothesis with advantage."⁴² Adopting a device invented by Professor Edgeworth in 1881,⁴³ he deduces everything necessary for his theory of equilibrium from "curves of indifference." Pareto's innovation consists in this: while Edgeworth derived indifference curves from the concept of utility, Pareto treats them as factual data.⁴⁴ Thanks to this procedure, "The theory of economic science . . . acquires the rigor of rational mechanics: it deduces its results from experience, without requiring the intervention of any metaphysical entity."⁴⁵

This apparatus of indifference curves or surfaces in hyper-space presents difficulties to "the literary economists," whom Pareto scorns. But fundamentally the same procedure has been brought

cal viewpoint. Both treat social value, and treat it apart from the main body of their theories; one calls this addendum economic theory, the other doesn't.

It may be added that Professor Fetter's new book brings the psychological type of economics distinctly nearer to recent pure theory in the discussion of value, and nearer to neo-classical theory in certain other respects, *e.g.*, the relation of cost to value and prices.

⁴² W. Zawadzki, *Les Mathématiques appliquées à l'Economie Politique*, 1914, pp. 142, 143.

⁴³ *Mathematical Psychics*, pp. 22, 29.

⁴⁴ *Manuel d'Economie Politique*, 1909, p. 169 note.

⁴⁵ *Ibid.*, p. 160. Pareto does not, however, wholly discard the concept of utility, or ophelimity. Concerning the role which it continues to play in his new theory, see Zawadzki, *op. cit.*, pp. 151-56. Compare the comments by Professor Edgeworth, "Recent Contributions to Mathematical Economics," *Economic Journal*, March, 1915, XXV, 57-62.

within the non-mathematical comprehension by one who is free both of the mathematical and the literary guild. Mr. Wicksteed conceives "of a general 'scale of preferences' . . . on which all objects of desire or pursuit (positive or negative) find their place, and which registers the terms on which they would be accepted as equivalents or preferred one to the other." This construction gives him "a system of ideal prices," upon which he can erect his whole edifice of theory, without inquiring into the grounds on which men's preferences rest.⁴⁶ Similarly, Professor Schumpeter, following Walras, assumes as data for his general theory, m individuals, their respective value functions for each of n goods, and the quantity of each good in the possession of each individual, denying that the economist has any business with the psychological processes from which the value functions are derived.⁴⁷

It is clear, at once, that this type of theory eliminates the problem of valuation from economics. That is, it does not concern itself with the way in which men find out what relative importance different goods have for their purposes. Instead, it assumes that this process of valuation has been completed before they come to market by each of the men with reference to each of the goods, and furthermore that the process has yielded in each man's mind definite quantitative results. Not until that stage has been reached does the pure theorist begin his work. His first step is to cast the finished individual valuations into the form of indifference curves, scales of preference, objective expressions of choice, or value functions. That gives him a set of what Mr. Wicksteed terms "ideal prices" as data for analysis. Then the theorist develops a logical scheme of conceiving the process by which mutually-interdependent market prices result from the "ideal prices." He does not, of course, profess to show what the market prices will be;⁴⁸ but he does demonstrate more adequately than any other type of economist the complex inter-relationships logically involved in the determination of prices in modern markets.

Even more strictly than the writings of the psychological school, pure economics is a generalized statement of the business man's

⁴⁶ P. H. Wicksteed, *The Common Sense of Political Economy*, 1910, pp. 32, 33.

⁴⁷ Joseph Schumpeter, *Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie*, 1908, pp. 64-68, 77-79, 85-87, 154, 155, 261, 541-47.

⁴⁸ For (1) the "value functions" are as yet arbitrarily assumed, (2) the whole discussion presupposes static conditions, and (3) when many men and many goods are involved the number of equations to be handled becomes too great for solution.

problem, a counting-house view of economic life. The problem concerns the complex mutual adjustments among a host of possible prices on the one hand and the possible quantities of different goods that might be bought and sold at these prices on the other hand. Just as business men think in the same terms of investments in commerce and in industry, so the pure theorists carry their argument forward from exchange to production, treating their subjects as exchanging goods and efforts with nature for new products on the same principles that rule their exchanges among themselves. Perhaps the chief difference between the viewpoints of business and pure theory is that the business man is less indifferent toward the grounds of choice than the theorist. He wants to know why people value goods in order that he may spend his advertising money wisely. To drop the theory of valuation from economics therefore reduces its significance for him. But in drawing narrow limits round their work the pure theorists know exactly what they are doing, and seldom fail to give their readers adequate warning of the modest pretensions of their results. These are merits which cannot be claimed so confidently for the psychological school at large.

V

Neo-classical economics, as represented by Dr. Marshall's *Principles*, puts money conspicuously into the foreground from the start. Indeed, Dr. Marshall declares that money "is the center around which economic science clusters."⁴⁹ But he hastens to add:—" . . . this is so, not because money . . . is . . . the main aim of human effort . . . ; but because . . . it is the one convenient means of measuring human motive on a large scale."⁵⁰

Why is the measurement of motive so important as to make money "the center around which economic science clusters?" The full answer to that naïve question runs as follows: Economics is a science of human behavior.⁵¹ Behavior is determined by motives. Motives differ widely in kind, and are continually conflicting with one another. Yet the economist may not exclude "the influence of any motive the action of which is regular."⁵² What he does is to arrange motives in "two opposing sets of forces, those which impel

⁴⁹ P. 22. This and the following references are to the 6th ed., 1910.

⁵⁰ *Loc. cit.*, compare p. 782.

⁵¹ Compare pp. 1, 14, 33, 49.

⁵² P. XIII, compare p. 24. For the great variety of motives which Marshall takes into account, see pp. 23-25; 86-89; 120-21; 141, etc.

man to economic efforts and sacrifices, and those which hold him back."⁵³ To know what economic actions men normally will take, then, the theorist must know the relative strength of these opposing sets of motives. But motives are mental states; and mental states are not directly commensurable unless they are similar in kind, and "unless they occur to the same person at the same time." "If then we wish to compare even physical gratifications, we must do it not directly, but indirectly by the incentives which they afford to action." ". . . the force of a person's motives—not the motives themselves—can be approximately measured by the sum of money which he will just give up in order to secure a desired satisfaction; or again by the sum which is just required to induce him to undergo a certain fatigue."⁵⁴

To explain and to predict economic behavior, then, the economist needs a measure of the strength of the opposing sets of regularly-acting motives. Such a measure money gives him. Indeed in the whole task of explaining the phenomena of exchange and distribution the money measures are more than mere measures of the forces at work;—they are themselves these forces. For the intensities of a man's desires and aversions do not affect the market, except as they become embodied in demand or supply prices. It is the magnitude of these pecuniary embodiments of motives, not the strength of the motives as such, that determines the results.⁵⁵

To explain how prices are determined and how wealth is distributed, however, is but one half of Dr. Marshall's task. He is equally interested in stating what results these processes produce. These results are subjective matters—magnitudes of satisfaction achieved and of sacrifice endured. Here again he uses his money measure, albeit with greater reservations. He is forced to assume that satisfactions correspond in general fairly well to anticipations. On this basis he makes the money measure of the strength of motives "serve, with all its faults, *both* for the desires which prompt activities and for the satisfactions that result from them."⁵⁶ There is, however, an important difference between the use of money measures to explain economic processes and to state their results. As demand prices the rich man's shilling and the poor man's

⁵³ P. 324.

⁵⁴ Pp. 15, 16.

⁵⁵ That Dr. Marshall does not dwell upon this rather patent feature of his theory arises from his practice of discussing homogeneous groups to which equal money measures stand presumably for equally intense motives.

⁵⁶ P. 92, and note.

shilling are equal in the market; as measures of satisfaction they are not equal to the economist.

Thus Dr. Marshall makes money an instrument of economic research. What Mill spoke of as obscuring the true character of economic processes, what Professor Fisher calls "the chief stumbling-block in economic theory,"⁵⁷ becomes in his hands the "economist's balance," which "has made economics more exact than any other branch of social science."⁵⁸ He even questions whether there could be a science of economics in a community that did not use money, unless there existed some substitute which would "serve to measure the strength of motives just as conveniently and exactly as money does with us."⁵⁹

Not only does Marshall use money for his own theoretical purposes; he also represents men as using money for their practical purposes,—buying and selling at money prices, making and spending money incomes. Instead of brushing these pecuniary phenomena aside as superficial, he treats them as serious problems to be solved in their own right, and as making a real difference in economic behavior that is not to be explained away. This it is that gives his treatise its realistic atmosphere.⁶⁰ But it is not merely to gain a realistic effect that Marshall pictures men as using money; he has a deeper reason. As no other theorist, he sees how the use of money clarifies obscure relations and simplifies economic thinking, both for the man in the street and for the economist in the study. For example, he shows how the use of money facilitates the task of distributing a person's resources in such fashion that the marginal utilities of a given outlay may be approximately equal in all branches of expenditure.⁶¹ He demon-

⁵⁷ "Capital and Interest," *Political Science Quarterly*, September, 1909, XXIV, 513.

⁵⁸ *Principles*, p. 14.

⁵⁹ P. 782.

⁶⁰ Professor Allyn A. Young remarks that Marshall's "theory is cast more consistently in terms of price than that of any other writer since Cournot." ("Some Limitations of the Value Concept," *Quarterly Journal of Economics*, May, 1911, XXV, 412 note.) But he also reminds us that Marshall takes the price of anything "as representative of its exchange value relatively to things in general, or in other words as representative of its general purchasing power" (*Principles* p. 62). That distinction means in practice that Marshall follows the business man in neglecting changes in the purchasing power of money, except when he is dealing with long periods. And on these latter occasions he allows for changes in the price level much in the business man's fashion. For example, see pp. 109, 132, 237, 238, 355, note, 362, 593-95, 709.

⁶¹ P. 118.

strates that buying and selling for money is a *simpler* problem than barter, both for the participants and for the theorist.⁶² He points out that while "the distinction between prime and supplementary costs operates in every phase of civilization," still "it is not likely to attract much attention except in a capitalistic phase."⁶³ He recognizes that his whole theory of normal value applies with more precision of detail to the actions of "city men," who are thoroughly disciplined in the use of money, than to the actions of the unbusiness-like classes.⁶⁴ Finally, he argues that the commutation of labor dues into money payments increased economic freedom, and that economic freedom has given "a new precision and a new prominence" to the causes that govern value.⁶⁵ Specifically, money rents brought it about that "the line of division between the tenant's and the landlord's share coincides with the deepest and most important line of cleavage in economic theory": namely, "the distinction between the quasi-rents which do not, and the profits which do, enter into the normal supply price of produce for periods of moderate length."⁶⁶

VI

Economics has advanced far since Mill declared, "there cannot . . . be intrinsically a more insignificant thing, in the economy of society, than money, except in the character of a contrivance for sparing time and labour." In one way or another, tacitly or explicitly, the types of theory current at present all make money in Dr. Marshall's words "the center around which economic science clusters." The psychological school started by representing economic life as guided by psychic bookkeeping, and has developed economics into "the science that treats phenomena from the standpoint of price." Pure theory in its severer forms drops the subject of valuation altogether and confines itself mainly to the inter-relations among "ideal prices." Neo-classical theory makes money the "economist's balance," and shows how the use of money simplifies economic problems both practical and theoretical.

In thus singling out the use of money as bringing system into economic behavior, as providing the basis for exact analysis, current theory is returning to the starting point from which Cournot

⁶² P. 336 and Appendix F.

⁶³ P. 362.

⁶⁴ P. XIV.

⁶⁵ Pp. 5 and 741.

⁶⁶ P. 636 and note.

set out on his researches in 1838. What we call price, what Cournot calls the "abstract idea of *wealth* or of *value in exchange*," he explains in his first chapter, is "suited for the foundation of a scientific theory," because it is "a definite idea, and consequently susceptible of rigorous treatment in combinations." This abstract idea of wealth "could not have been grasped by men of Teutonic stock, either at the epoch of the Conquest, or even at much later periods, when the feudal law existed in full vigor." ". . . Such an idea of wealth as we draw from our advanced state of civilization, and such as is necessary to give rise to a theory, can only be slowly developed as a consequence of the progress of commercial relations. . . ." A remarkable anticipation of the outcome of two generations of hard thinking! And Cournot applies his insight: as a first problem he chooses not barter, but foreign exchange—the kind of transaction in which nothing but pecuniary factors are involved.⁶⁷

In singling out the influence of an institutional factor as the basis of rationality, current economics is also in line with current psychology. Psychologists hold that man starts with an immense number of inborn reflexes, instincts, and capacities, inherited generation after generation with numberless differences as between individuals, but with slight changes as regards the species. The behavior these propensities produce is at first quite unreasoning. But among the inborn capacities is the capacity to learn; that is, the capacity to form innumerable *combinations* among the innumerable original propensities. Practically every activity of mature life is the expression not of any single instinct, but of some combination into which several or many propensities have entered. It is these changing combinations among substantially unchanging elements that differentiate the behavior of the civilized man from that of the savage. And these combinations are formed afresh in every child, primarily in his intercourse with other human beings. Thus intelligence is a social product developed in the individual through the exercise of his inherited propensities, and its special character depends upon the society into which the individual is born. The great social institutions, such as speech, writing, the

⁶⁷ A. Cournot, *Researches into the Mathematical Principles of the Theory of Wealth*. 1838. Translated by N. T. Bacon, 1897. Chapters i and iii. Professor Henry T. Moore has pointed out to me two later passages in Cournot's writings in which he seems to lose the vision of these early pages. One occurs on p. 164 of the translation cited, the other on p. 4 of his *Revue sommaire des doctrines économiques* (1876).

practical arts, and religion, which are passed on with cumulative changes from one generation to another, play the leading rôle in this nurture of intelligence. They are standard behavior habits—habits of feeling, thinking, and acting in the face of frequently-recurring situations—which have approved themselves to the community. These institutions include among their other elements the abstract concepts which are the most precious products of intelligence because they are the indispensable tools of further thought. By learning to use such concepts in dealing with the situations which confront him, the individual standardizes and rationalizes his own behavior. To find the basis of rationality, then, we must not look inside the individual at his capacity to abstract from the totality of experience the feeling elements, to assess their pleasant or unpleasant characters, and to compare their magnitudes. Rather must we look outside the individual to the habits of behavior slowly evolved by society and painfully learned by himself.⁶⁸

Of course, the use of money is one of these great rationalizing habits. It gives society the technical machinery of exchange, the opportunity to combine personal freedom with orderly coöperation on a grand scale, and the basis of that system of accountancy which Sombart appropriately calls "economic rationalism." It is the foundation of that complex system of prices to which the individual must adjust his behavior in getting a living. Since it molds his objective behavior, it becomes part of his subjective life, giving him a method and an instrument for the difficult task of assessing the relative importance of dissimilar goods in varying quantities, and affecting the interests in terms of which he makes

⁶⁸ This statement does not mean that the exercise of intelligence is a prominent feature in all habitual action, any more than it means that all institutions are rational. But, as our pure theorists insist, those actions which are most frequently repeated get most thoroughly organized, because they give the fullest scope to learning by trial and error. The more thorough such a piece of organization becomes, however, the less it calls for supervision by intelligence. Hence arises the possibility of contrasting routine with intelligent action. But the successful routine of today remains a triumph of yesterday's creative intelligence, and if today's hard thinking prove equally successful it may organize the routine of tomorrow. Of course the growing individual must master the past achievements of intelligence before he can participate in work upon present problems. And these past achievements are embodied primarily in social institutions. The more intelligently these institutions have been adapted to current social needs, the more can a learner get from them, and the more will creative intelligence seek new worlds to conquer.

his valuations. Because it thus rationalizes economic life itself, the use of money lays the foundation for a rational theory of that life.⁶⁹ Money may not be the root of *all* evil, but it is the root of economic science.

That economists are coming to accept this view is no more due to their study of psychology than it is due to their study of Cournot.⁷⁰ It is the result of learning by trial and error. They have tried treating money as a superficial phenomenon: they have tried using hedonism as the basis of economic rationality. But in working out, in treatise after treatise, a reasoned account of how men behave, they have come, without foreseeing what they were doing, to the basis on which Cournot built in 1838. That a serious and long-sustained effort to explain their phase of human behavior has brought economists unwittingly to much the same viewpoint as psychologists have attained by other routes may well raise their confidence.

* Of course, an economic theory might be worked out concerning the way in which a species of animals or a tribe of lower hunters get their livings. But such a theory would be a descriptive analysis of behavior written by an outsider. Our economic theory is less an account of what men actually do than a statement of what it is rational for them to do, as seen by a shrewd fellow-citizen. Ricardo expressed this difference clearly in the remarkable letter to Malthus written Oct. 22, 1811, concerning international shipments of money. "I assume," he says, "that nations . . . are so alive to their advantage and profit . . . that in point of fact money never does move but when it is advantageous . . . that it should do so. The first point to be considered is, what is the interest of countries in the case supposed? The second, what is their practice? Now it is obvious that I need not be greatly solicitous about this latter point; it is sufficient for my purpose if I can demonstrate that the interest of the public is as I have stated it. It would be no answer to me to say that men were ignorant of the best and cheapest mode of conducting their business . . . because that is a question of fact not of science and might be urged against almost every proposition in Political Economy." (*Letters of Ricardo to Malthus*, ed. by J. Bonar, p. 18.) So long as economists follow this practice of explaining what is rational conduct under the conditions assumed, and depend upon an assumption that men are rational to make the theory a tolerably accurate account of the "facts," it is particularly desirable for them to keep their rational explanations on the same basis as men's rational economic choices.

⁶⁹ Dr. Marshall does indeed acknowledge his indebtedness to Cournot, but with reference to certain mathematical features of his work, not with reference to the use he makes of money. See preface to the first edition of the *Principles*; 6th ed., p. XV.

VII

If it is good to celebrate this achievement, it is better to consider how we may turn what has been won for us by others to best account in our own future work. Are we to confine our theorizing consciously to the pecuniary aspect of life? Are we to devote our energies wholly to elaborating the theory of prices, to refining the logic of economic accounting? I think not. Clear recognition of the rôle which money does play in economic life is more likely to broaden than to narrow the scope of economic theory. It should help us to design, what we sorely need, a framework within which all sorts of contributions may find their proper places. I see the situation thus:

Economic life may be regarded as a continuous process of providing and using commodities and services. This industrial process includes the work of the farm, the mine, the railway, the warehouse, the store, the engineering office, etc., as well as the work of the factory. It has its elaborately differentiated techniques, resting primarily upon the physical sciences and mathematics, in less measure upon certain branches of biology. It has its technical experts, its organized labor force, and its capital in the shape of material equipment.

Economic life may be regarded also as a process of making and spending money. This business process is shared in by everyone who is getting a money income in any way or laying out money for any purpose. Its technique rises from the simple planning of family budgets, through "the exact science of making change,"⁷¹ the arts of bargaining and salesmanship, bookkeeping and accountancy, to the large tasks of financial administration. Its technical experts are business enterprisers, chartered accountants, bankers, brokers, business agents of trade unions, etc. Its special labor force includes bookkeepers, cashiers, advertising clerks, and the like. Its material equipment is meager; but all capital belongs here in the guise of pecuniary funds.

Making goods and making money are both objective processes, at some points quite distinct from or even opposed to each other; at most points running side by side, concerned with the same objects and supervised by the same men. We habitually interpret these two objective processes in terms of personal and social interest. These interpretations give us two other ways of looking at economics. To be specific:

⁷¹ The phrase is borrowed from Thorstein Veblen's *Instinct of Workmanship*.

Economic life may be regarded also as a process of making efforts and gaining satisfactions; or better, the activities of getting and using goods, of making and spending money, have a subjective aspect upon which attention may be focused. In this dim inner realm of consciousness it is difficult to make out the technique; there are no technical experts, no labor forces, no material appliances, and no capital in any sense, except by virtue of fanciful analogies.

Economic life may be regarded finally as the process by which a community seeks its material welfare. On this view every person is a contributor to, a burden upon, or a detractor from the common weal. Such technical experts as there are must be sought among the people in public or private life who seek to promote social welfare by constructive thinking, by agitation, by philanthropic effort, or by doing their daily work with an eye to its serviceability to the community rather than its profit to themselves. Such accounting as is possible runs in terms of heightening or lowering the community's vitality. The concept of capital merges into the broader concept of resources—soil and climate, mines and forests, industrial equipment, public health, intelligence and general education, the sciences that confer control over nature, the sciences that aid in developing body and mind, and the sciences that bear upon social organization.

Now our interest in economics centers in its bearing upon social welfare in the present and the proximate future. As Professor Pigou and Mr. Hobson have shown,⁷² it is feasible even now to set up a tentative criterion of economic welfare, and make investigations into the relations between various features of economic activity as now conducted and welfare as thus conceived. Such work may have as keen theoretical interest, as genuine scientific standing, as work that professes to maintain a serene indifference to the fate of humankind.⁷³ But its successful prosecution on a scientific

⁷² A. C. Pigou, *Wealth and Welfare*, 1912; J. A. Hobson, *Work and Wealth; a Human Valuation*, 1914.

⁷³ The "socio-ethical" element in the work of many German economists, on the contrary, does not seem to me to be economic theory, or to have a scientific character—however excellent it may be in other respects. For these writers are concerned to inculcate their own ideals of social welfare, and to show by what specific changes they may be approximated more closely. They exercise the functions of preachers and statesmen rather than the functions of investigators. It is interesting to notice that the scientific sterility of this type of work has recently been the subject of numerous complaints in Germany itself.

basis presupposes considerable knowledge of how economic processes actually work at present. While the understanding of these processes has been the chief aim of economic investigation for a century, no one fancies that this fundamental task has yet been adequately performed. In the interests of social welfare itself we need clearer insight into the industrial process of making goods, the business process of making money, and the way in which both sets of activities are related to each other and to the individual's inner life.

Into our conjoint attack upon these problems a clear recognition of the rôle played by money promises to bring more definite order and more effective coöperation. It helps us to formulate our tasks in ways that suggest definite things to try next. For example, to find the basis of economic rationality in the development of a social institution directs our attention away from that dark subjective realm, where so many economists have groped, to an objective realm, where behavior can be studied in the light of common day. It shows the high promise of that effort to frame an "institutional theory" of value which certain of our colleagues have begun.⁷⁴ It helps us to keep in mind the fateful distinction between those elements in human nature that are inherited and hence presumably unchanging, and those other elements that are acquired and hence presumably susceptible of modification—a distinction around which turns so much of our thinking concerning days to come. To realize that our theoretical inquiries cluster about the workings of an institution bridges the gulf that has existed to the detriment of both between economic theory and economic history. It establishes upon a common plane the work of those who seek to know how economic organization has developed in the past, of those who seek to know how it functions in the present, and of those who seek to know what changes it promises to undergo in the future. To differentiate sharply between making money and making goods brings into its proper prominence the problem of the relations between business management and industrial efficiency. It prepares us to face that subtler problem of the dissimilar habits of thought drilled into men by the daily work of

⁷⁴ See the various papers of Professor C. H. Cooley, referred to in the latest of his series, "The Progress of Pecuniary Valuation," *Quarterly Journal of Economics*, November, 1915; and the discussion of "The Concept of Value" by Professors B. M. Anderson, Jr., and J. M. Clark in the *Quarterly Journal of Economics*, August, 1915, especially Professor Clark's remarks on p. 715.

the counting-house and of the factory.⁷⁵ By going in for a realistic treatment of business life, we may hope to arouse a keener interest and a wider coöperation in economic theory. For we shall be analyzing the actual processes with which men of affairs are concerned; we shall be treating problems that have meaning to legislators, administrators, and judges; we shall be stating our hypotheses in ways that facilitate their practical testing; and we shall be reaching conclusions that have a clearer bearing upon our hopes and fears for the future.

The current tendency to make money "the center around which economic science clusters," then, is a tendency to be fostered. For that course promises (1) to clarify economic theory by giving it a better framework, (2) to render economic theory more useful by directing attention to those actual processes with which all serious proposals for governmental regulation and social reorganization must deal, (3) to make economics more realistic and therefore more interesting intellectually as well as practically, and, finally, to make economic theory more profound by orienting the economist for a fruitful study of his aspect of human behavior.

⁷⁵See the paper prepared by Thorstein Veblen for the annual meeting of this Association in 1900: "Industrial and Pecuniary Employments."

TENDENCIES IN ECONOMIC THEORY—DISCUSSION

H. J. DAVENPORT: I find my place in the discussion of these papers a difficult one. Professor Hollander's paper urges—if I understand it rightly—that little or nothing worth while has been accomplished in theory during the last thirty years—there being little really left to do. Professor Mitchell, on the contrary, holds that the accomplishment is great and admirable, only that the process must go much farther in the same general direction. I should perhaps do well to withdraw and to let these men settle the matter between themselves, rather than to take an intermediate position involving the mugwump hazard of getting shot into from both directions.

In the main, however, I concur in the position of Professor Hollander. Had it been within my power—and had it appeared to me worth while—I should have written much this same sort of paper, trying possibly to improve on the temper of it, but ratifying and emphasizing the well-known essentials of all scientific method,—wise induction, accurate deduction, adequate verification. I agree that whenever wrong conclusions have been reached, something must have been amiss in one or more of these processes. Perhaps, however, I should have emphasized a further process; for it seems to me clear that before one has arrived at the point of making any induction, he must have had in mind some query or interest or problem, on the basis of which to select and group the facts appealing to his attention. If there be in his mind no principle of grouping—of determining what, among the infinitude of things to be seen, he shall see and shall make the basis of the inductive process—he will see nothing in particular, and have nothing from which to induce. But suppose him somehow to have selected, say, a chicken, a harvesting machine, a sofa-pillow, and a pound of Stilton cheese, as his facts to be thought about. Even in making this grouping, he must at least have decided that featheredness is not the organizing interest, because only the chicken and the cushion are feathered. Now assume that he notes that they all bear prices—aware, of course, all the while that the possession of feathers cannot be the explanation—and so induces the hypothesis that labor content must explain not only the prices but also the price ratios between the articles. Now let him proceed to deduce from this law,—this tentative, hypothetical explanation. If he deduce logically, a difficulty must present itself with his hypothesis immediately that he comes upon something that bears a price, e.g., land, the existence and the price of which can have involved no labor. Forthwith, his hypothesis must, some-

how, perhaps through further induction, be modified or reconstructed. If he does neither of these things, his process of verification has been defective—has not consulted facts enough—lacks due verification. Continually emerging discrepancy is the very nature of thinking, as the pragmatists tell us.

Thus, I go along, in the main, with Professor Hollander's views upon right method. But I am compelled to disagree with him in his choice of the writers and the doctrines that illustrate right method. He is sure that the later theorists have erred somewhere, and is sure of this precisely because he does not concur in the conclusions which they have reached. His test of method is one with yours and mine,—are the results correct? If you have arrived at right results—as you have—their criticism cannot touch you. Nor do I regard myself as falling under the strictures, since whatever I hold as correct, I have to believe, for the time being. Nor, by this test, can Professor Hollander suspect his own methods. So, I say, let the whip sing about the legs of the other fellows,—who are wrong. While they dance you and I may be comfortable. Let the galled jade wince; my withers—yours, also—are unwrung. So, if Professor Hollander is satisfied to believe that the law of increasing returns, rightly induced, deduced, and verified, is merely the obverse of the law of diminishing returns, or that he may hold that any or all of the five different sorts of land differentials can have no part in price determination, or that there are the indicia of right scientific method in Cairnes's doctrine of non-competing groups—where, if the members are in one vocation, they compete but get wages disproportional to pains, and if in different vocations, may get proportional wages but cannot compete—he is justified in his appraisal of the methods by his appraisal of the conclusions. I, in turn, regarding the conclusions as mostly wrong, find in precisely these cases admirable examples of just the sort of methods to avoid.

In this sense, then, I am glad to find myself in full accord with Professor Hollander's fundamentals, and in disagreement only in the minor matter of applications. And on this basis, also, as I take it, may Professor Mitchell easily find his place in the discussion. But he and I are also in substantial agreement on the question of where the right conclusions are to be found, and upon the further directions in which still more will be discovered. But I do not altogether like it of him that he declares me to belong to the psychological school, despite the unimportant fact mentioned by him that I declare that I do not so belong. No matter, however; for I don't precisely know what it means to be a member of this school. I feel much as did Billy Baxter,

when someone called him a duffer. He said that he did not know at all what a duffer might be, but judged it, anyway, to be about the worst kind of a thing possible for a fellow to be.

W. H. HAMILTON: In the two papers to which we have just listened an issue in economic methodology is clearly joined. Professor Hollander has given a spirited plea for "anti-intellectualism." Professor Mitchell has presented a careful argument for rationalism. Quite paradoxically the former has advanced a speculative argument against "theorizing," while the latter has presented by concrete instance, and hence inductively, a defense of theory.

In Professor Hollander's paper two main theses stand out. The first is a denial of validity to the methods of verification which economic theorists have employed. Since it is a reduction of the phenomena of a particular field to generalizations, it convicts Professor Hollander of "theorizing." But it is, in his words, a "hypothesis," rather than a "theory" or a "law," since he has failed to verify it. He has ignored the voluminous literature of methodology, possessed not only by economics but by the other social sciences. He has overlooked the examination of the nature of economic problems and phenomena found therein, and the attempts to establish methods of verification in harmony with these. This omission would have been pardonable, had he given attention to this issue. Instead he has been content to verify his conclusions solely by analogy. He argues that because certain methods have yielded valuable results in the natural sciences (which, it might be added, are still in the descriptive stage), economists should have used these methods of verification. One of the most valuable parts of his paper is his protest against the use of analogy. It would accordingly be unfair to him to accept his conclusions, so long as they are supported alone by analogical verification.

His second point is an imputation of almost negligible value to generalization and speculation. Again he convicts himself, for the paper just read abounds in generalization and in what I should regard as very adventurous speculation. The issue is squarely presented in his strictures upon the writing of textbooks. The guilty among us scarcely need defense at my hands. I wish only to remark that such general and speculative writing serves two closely related and indispensable functions: first, it allows us to take tentative stock of our accomplishments and lack of them; and, second, it reveals our shortcomings and points to the tasks which are most worth the doing. A piece of work cannot confer value upon itself. If carefully, and "scientific-

cally," done, it is not, for that reason, necessarily valuable. Above all it can furnish no evidence that it represented the task most worth doing; that the resources spent upon it might not have yielded more valuable results if employed otherwise. Its value must come from some external source; its justification must be found in the uses to which it can be put.

It is just such an evaluation of results and of possible tasks which textbooks in economics (which are descriptions of coherent systems rather than mere pedagogical manuals) have furnished. To take a concrete example, just now the subject of trade unionism is badly in need of a general, even if tentative, statement of results. The clear vision and the sense of relative values which such a text would impart should suggest to the workers in the field the tasks which are really most worth doing. It should prevent the production of such a large amount of mediocre work, and the waste of valuable labor in many futile inquiries. I cannot forbear in this connection repeating, with, I trust, a pardonable change of emphasis, the quotation from Huxley with which Professor Hollander, quite happily but somewhat inadvertently, closed his paper: "Whenever science has halted, or strayed from the right path, it has been, either because its votaries have been content with unverified or unverifiable speculation, or it has been *because the accumulation of details of observation has for a time excluded speculation.*"¹

With the methodological thesis implicit in Professor Mitchell's paper I am in agreement. The task of economic theory in balancing observation, generalization, and speculation is an extremely difficult one. Observation is necessary to relevancy; generalization to consistency. The subject has ever been, and in its nature must ever remain, the center of a perpetual struggle between relevancy and consistency. The economic system is rapidly changing, as is the intellectual system, in terms of which the explanation is to be made. Yet consistency can come only from temporarily arrested observation; the careful and tortuous work necessary to it requires decades of "hard thinking."

The chief criticism of the prevalent neo-classical economics is that it enjoys the latter at the expense of the former. Yet recently the note of relevancy has been quite dominant. The development of theory is just now being characterized by several more or less independent tendencies. As yet they present no semblance of articulation into a coherent system. These tendencies are semi-critical, semi-constructive. Among the former perhaps the most important is the re-examination

¹ Italics are the speaker's.

of the preconceptions of the science. A second is the attempt to free theory from its ethical implications and give it a more positive statement. This is evidenced by the tendency away from "marginal utility" and from the "productivity" theory of distribution. A third is a disposition to replace the static discussion of doctrines, whose objective has been eternal verity, with a consideration of systems in their larger aspects against the background of their economic and intellectual environment. The attempts at constructive work are as varied. Quite significant is the noteworthy attempt to restate the assumptions of economics. The recent introduction of the "new volitional psychology" and the substitution of the idea of "process" for that of "normality" are striking examples. Equally significant is the attempt to cover the generally neglected field of institutions. Professor Mitchell has just advocated the introduction of one of these, pecuniary valuation and motivation, in value theory itself. Others are insisting upon a critical study of the institutions which condition the valuations of the market-place, such as property, competition, and even pecuniary valuation itself. Mention must also be made of the reappearance of "welfare" as the fundamental concept of the science. This idea has played quite a part in English economics in the last few years.

What tendencies among these will prove of positive value, what contributions they will lead to, and what uses will be made of them, who can say? They furnish, however, sufficient evidence that theorists appreciate the necessity of observation and that they are intent upon relevancy. They will assuredly make some contribution to economic theory. But as surely we know that much of the old is valuable. In logical consistency it sets an ideal which economics must ever keep before it if it would preserve its wonted intellectual respectability. To be contemptuous of speculation and generalization or of observation is alike dangerous. To scorn the old or to venerate it is alike inimical to advance. In the future, as in the past, by aiming at relevancy and consistency, by using speculation, observation, and generalization, economic theory must work its way from tentative statement to tentative statement.

RICHARD T. ELY: The discussion in some of its aspects sounds to me like a voice from the tombs. Professor Hollander goes back to a distant past and reminds us of sins which we committed long ago. But not all those things which may now seem like sins were sins after all. Utterances of the past must be judged with respect to the conditions of the past. My friend and colleague, Taussig, and I can look

back a good many years, and I am sure that he feels, as I do, that great progress has been made since the American Economic Association was founded. Theory has been improved in a good many respects. However, this is a large subject, and I hope that on some future occasion I shall also have an opportunity to read a paper on economic theory and then I can have my say too.

IRVING FISHER: Both of the papers seem to me excellent. I would like to say a few words about Professor Hollander's. His is the best paper on methodology which I have heard before this Association or elsewhere. I admit, however, that this is not necessarily as high praise as it sounds!

I was somewhat disappointed at the reaction of those who commented on Professor Hollander's paper. I sincerely hope that the young men who are beginning to work in economic theory will take to heart what Professor Hollander has said. I have long believed that economists would profit greatly by taking some older and more developed science as a model for method; it does not much matter whether it be physics, biology, or some other science. One of the speakers has said that economics is not physics. No, but its method is the method of physics, and I believe a study of physics to be one of the best preparations for a young man intending to enter economic theory. The trouble with economic theory is that economists have entered the field, either from the *a priori* side of philosophy and metaphysics where the proper importance of cold facts has not been recognized, or on the other hand, from the side of history where only facts and not principles have been studied. The result is that we have suffered from both of the evils against which Professor Huxley warns all scientists. My chief criticism of Professor Hollander's paper is that he considered only one of the two pitfalls mentioned by Huxley. He complained of half-baked theories. He should also complain of half-digested facts. Our theoretical economists are not sufficiently practical, while our practical economists are not sufficiently theoretical. I might also raise the question whether Professor Hollander has not been unduly severe with some of the individuals whom he has selected to criticise. Some of them, at least, were doubtless unable to supply the needed verification. He has given us a counsel of perfection. Often in economics as in any other science we have to throw out suggestions or hypotheses in advance of any possibility of verifying them. We can scarcely be criticised if we realize that verification is needed and so specify. Severe criticism is merited only by those, and there are many, who fail to recognize that verification is even desirable.

B. M. ANDERSON, JR.: I shall take time only to enunciate a thesis, in further development of the theme of Professor Mitchell's excellent paper on "The Rôle of Money in Economic Theory."

Very much of our economic theory has been static theory, concerned with "normal equilibria" and delicate marginal adjustments, resting on the assumptions of a fluid market where labor, capital, and goods are perfectly mobile. Theory resting on these assumptions may, indeed, abstract from the idea of money. If these assumptions were true, money would, indeed, be a meaningless "cloak," obscuring the real forces at work. This body of static or normal theory has real significance for the understanding of economic life. The tendencies it formulates are real. The marginal adjustments are made, not as smoothly as the pure theory would indicate, but none the less smoothly enough to give verisimilitude to the theory.

But the explanation of the degree of fluidity which the market manifests, of the ease and promptness with which adjustments to changed conditions are brought about, is to be found, in large measure, in money and credit themselves. It is the business, the *function*, of money and credit to overcome "friction," to bring about quick readjustments, to effect "transitions," to make possible the static equilibria,—in a word, to make the assumptions of static theory come true. This is not the whole story as to the functions of money and credit, but it is the central point. The greater part of the exchanging that actually takes place in the modern world grows out of dynamic changes in economic life. In a static state, or normal equilibrium, where every laborer has already found the work that is the best he can get, where every capitalist has already found the investment which suits him best, where land and houses are in the hands of those best adapted to hold them, etc., there would be little occasion for the sale of lands, of corporate securities, etc. With the price fluctuations due to the uncertainties of transition periods and dynamic changes banished, there would be little occasion for speculative trading. Speculative exchanges today make up the major part of the actual volume of trade in the United States.¹ In a state of normal equilibrium there would be, of course, exchanges for the purpose of carrying raw materials through the various stages of production to the consumer, etc., there would be payments to laborers, etc., and there would be some "time speculation" in articles where there is seasonal variation in production. But the great bulk of the actual exchanging which now takes place would not occur.

Static theory thus rests on assumptions which are valid chiefly be-

¹ I shall offer statistical evidence on this point in a book on *The Value of Money* now in process, which I hope to publish during the coming year.

cause money and credit have made them so. Static theory thus rests on the foundation of money and credit. It is somewhat ungracious for static theory to despise that foundation, and very indiscreet for static theory to try to knock the foundation down.

It is, moreover, quite grotesque for static theory to offer itself as a support for its own foundation. A static or "normal" theory of money and credit, resting on the notion of accomplished equilibrium, after transitional changes have been effected, misses the main point as to the function of money and credit. Static theory which assumes frictionless fluidity, misses the whole point concerning money and credit. A functional theory of money and credit must be a dynamic theory, basing itself on an analysis of friction, of transitions, and the like. And this is one reason, among many, why I find the quantity theory of money indefensible.

PRICE MAINTENANCE

By F. W. TAUSSIG

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I shall confine my discussion of the topic assigned for this meeting to the practice among manufacturers of prescribing the price at which their products shall be sold by retail dealers. Attempts have also been made to fix in similar ways the prices at which wholesalers (jobbers) shall sell to the retailers. But stipulations of this latter kind are more easily evaded than those binding the retailers; and they seem to be less frequent. In any case they present essentially the same questions of principle, and hence call for no separate discussion. And it is the endeavor to fix retail price that chiefly arouses the concern of the community and is supposed to call for legislation.

Obviously the questions hereby presented are different from those of the trust problem. It is not a combination of manufacturers or of middlemen that we have to consider, or an agreement by a group among them to fix the prices at which they shall sell an article or set of articles. Each manufacturer is supposed to deal independently with his customers, merely fixing the prices at which they in turn shall sell. He continues to compete with other manufacturers producing the same thing or similar things. If the prescription of the prices at which the retailers shall sell has any effect on the amount received by the manufacturer or on his profits, this is an indirect and perhaps incidental consequence, quite different from the direct effect which would come from raising or stiffening through combination the prices obtained from the wholesalers or retailers. If there is restraint of trade in the legal sense, the restraint is of a different sort from that of the ordinary contract or combination. If there are consequences which the economist finds objectionable, they are different from those wrought by the trusts.

We may begin by endeavoring to analyze and understand the phenomenon, to see how it comes about. In this task of analysis, we shall follow two distinct lines of explanation. The first of these relates to the variations of demand and the structure of demand schedules,—topics with which economic theory is accustomed to deal. The second relates to the working in practice of the traditional machinery of distribution through middlemen. The first we may call *psychological*; the second we may call *marketing*.

First, then, as to demand schedules and their bearing on the problem in hand. This endeavor to prevent retailers from pushing their sales is anomalous. It seems to run counter to general propositions which are universally accepted in economic theorizing. If there is one thing which is laid down in all the books, it is that a decline in price leads to an increase in the quantity demanded and sold. The demand schedule, we are taught, always shows an increase of demand with a lowering of price. Yet the endeavor to keep up retail prices would seem to be based on a contrary supposition. Let me explain. In all this price-fixing system, the price received by the manufacturer himself is in no way restricted or even directly affected. His own price to the trade remains no less and no more. It is only the *resale* price that is sought to be controlled. Now, the manufacturer's immediate interest, and indeed his only interest, would seem to be in his own receipts. So long as he settles the price which comes to him, why should he concern himself with the terms of further sale by jobber or retailer? Nay, his interest would seem to be that these middlemen, and especially the retailers, should sell as cheaply as possible, and advertise as much as possible their cheap sales. The decline in retail price leads to increase in the quantity sold,—this is our familiar theorem. So far as the manufacturer himself is concerned, there is no decline in price; he sells to the trade at his own price,—a price more or less established, and independent of retail dickering. If the shopkeepers push the sales of his wares, stimulate demand by cutting down the "spread" between his price and the price to consumers, why should not he, as well as the consumers, accept the situation with satisfaction? Ordinarily, it need not be said, this is the manufacturer's attitude. He sells to the trade at whatever prices he can get, and does not trouble himself about the further proceedings of jobbers and retailers.

It will be replied at once that the manufacturers whose case is here under consideration are *not* engaged in the ordinary ways of production and sale. They turn out articles not of the usual sort, but "identified" articles; things which are earmarked by brand, trade-mark, patent, distinctive name; almost always things which have been widely advertised. The articles are of the most various kinds,—watches and safety-razors, garters and shoes and underwear, whiskies and "proprietary" drugs, books and typewriters,—but all "identified." The number and the proportion of articles thus earmarked seem to be increasing; apparently the drift is to-

ward merchandising in this way. Now, as regards the identified articles, the maker's attitude is different from that of the ordinary manufacturer. The retailer is to be restrained from trying to stimulate their sales by reducing the retail profit and the retail price. The question recurs, why should the manufacturer wish to restrain him?

The answer,—not the whole of the answer, but so much as relates to the psychology of demand,—is to be found in the fact that the demand schedule does not follow the usual course, or at all events may not follow it. There is at least the possibility of an exception to the supposedly universal law. It is *not* universally true that a decline in the price of a commodity leads to the buying of more of it. The experienced business man's perception of this fact goes far to explain his aversion to retailer's price cutting. He does not formulate the matter in the terms which we economists use, and indeed does not often formulate it in any explicit way; but he knows that there is trouble here.

The typical case, and for the present purpose the instructive case, in which lowered price does not lead to increased demand, is that of articles of prestige. If diamonds were to become very plentiful and very cheap, it is probable that people would buy not more of them than now, but less. The brilliant stones would no longer gratify the love of ostentation, the emulative disposition; they would no longer suggest a handsome income or yield that inner satisfaction which comes, by association of ideas, from the possession of the rare and the precious. Their value would rest mainly on their usefulness in the arts, and would be kept within narrow limits by the competition of substitutes. The owners of the South African mines understood the situation perfectly. If diamonds were to retain their glamor and price, they could not be allowed to become too plentiful.

Now I am convinced that this factor plays a part in the business policy of prescribing retail prices. As a rule—not universally, but as a rule—the identified goods are widely advertised as exceptionally good. The advertising phrases sometimes used are such as to countenance the more pessimistic views on the lack of social gain from “publicity.” The identified goods are said to be “quality articles”; they are for the *good* trade; they are for particular people; a little higher in price, but oh, how superior; and so on. If articles thus lauded are offered at cut prices, if they are knocking about in quantities on the counters of cheap shops at less

than the announced price, if they are used as "leaders" to seduce the bargain hunters,—their prestige is endangered. They may cease to be esteemed as quality goods. It is not an uncommon experience, I have been told (and some curious examples have been brought to my attention), that a manufacturer who has tried in vain to force sales of a product by lowering its price has found that by advertising lavishly under a fetching label he can sell more of that same product at a *higher* price. The converse is feared in case of a cut price for an "established" article. Though some additional purchasers may be tempted at the outset, prestige is impaired. The nimbus may be dissipated; particular people may no longer be attracted. Therefore the retail dealer is to be restrained from cutting the price. In the long run, the lower price, so far from enlisting purchasers, is as likely to repel them.

So much for the explanation on psychological grounds. I have no doubt it goes a good way toward clarifying the apparent anomalies in the manufacturer's attitude. But obviously it is of varying significance for different sorts of goods; and it is applicable in any case only to those for which prestige value is significant,—some articles of dress and food, for example. A great range of identified goods would seem to be beyond its scope. Such, to give a clear instance, are books; yet publishers are as solicitous as any price maintainers that their list rates should be maintained. On the whole, this factor seems to be less important than the other to which I have referred,—that arising in the conditions of marketing. To this second element in the case I will now turn.

The established mechanism for getting goods from the large-scale producer to the scattered individual purchasers is through the jobbers and the retailers. Now most of these do not relish cutting. They like to carry on business in the accustomed way, to sell at a "reasonable" profit, to maintain the traditional spread between manufacturer's price and wholesale price and then that between wholesale and retail price. They believe sincerely that the traditional rates of profit,—that is, the margins between buying prices and selling prices,—are not excessive, and that in the long run merchandising can not be conducted on lower terms. Variations from the established system they believe to be necessarily temporary and irregular,—disturbances from which a reaction is bound to set in, or mere devices to confuse and deceive the customers. The system of price prescription for identified goods conforms to these traditions. The retail price becomes the starting

point; with this the retailer makes his reasonable profit; the wholesaler in turn makes his reasonable profit, over and above the manufacturer's price; the manufacturer finally gets what remains, his own gross receipt; and all pursue their ways in calm and content.

Then comes some iconoclastic price-cutter,—a department store, or a mail-order house, or a "cheap trade" low-class retailer,—and parades a cut-price. The device is the more effective in attracting customers to him, at least in the first stages, in proportion as the article and its standard price (fixed price) are well known. Once the process of cutting is begun, difficulty arises in maintaining the standard price anywhere on the line. Quite apart from any loss of prestige for the article, buyers now expect the price to be cut generally. The shop that refuses to yield begins to be thought of as a dear shop. The retailer complains to the jobber that he can no longer hold the standard price, and asks the jobber to shade the jobbing price; the jobber in turn complains to the manufacturer, and asks him to shade *his* price.

Now it is all very well for the manufacturer who is thus pestered to say that the troubles of jobbers and retailers are their own, and that they must settle their conditions of competition for themselves. He finds that his goods are in danger of becoming unpopular in the trade. It no longer "pays" to handle them; there is "no money" in them. They are not boycotted; but they are no longer pushed. Salesmen are not coached to press them on the attention of jobbers, and retailers do not place them conspicuously on their counters. Other competing articles are favored, usually because they can be bought at lower prices. The once-favored manufacturer finds that the *accessibility* of his product is seriously affected. It is open to him, of course, to maintain the *repute* and the *vendibility* of his product by continued and even increased advertising. He may maintain its accessibility by alliance with some unorthodox selling agent, or even by setting up a new distributing system, e.g., by doing his own jobbing or retailing. But these measures call for an extended range of additional operations, for large capital, for new responsibilities of management. Though they are not impracticable, they are difficult and expensive. The simplest and easiest policy is to conform to the existing system, subdue the rebellious retailer, and make it worth while for the regular forces to remain loyal. Support the brand, support the price, support the trade,—this is good business.

Such are the grounds, so far as I can make them out, for the

great concern of this knot of manufacturers about a matter which seems at first to be none of their concern,—the price at which somebody else sells a product for which they have already received a price satisfactory to themselves. The next question is whether there are reasons for justifying or condemning the practice. Having explained the phenomenon—the first business of the economist, and doubtless his main business—we may consider whether it conduces to the public well-being. Is it to be encouraged by legislation, or to be checked?

On those aspects of the case which are connected with advertising and prestige,—the psychological aspects, as I have styled them,—the chief consideration which is urged in defense of the set-price system is that it enables or promotes the maintenance of the quality of the goods. It is said that the maker of the identified article, being assured of the price at which it will be sold at retail and therefore at wholesale, can maintain its quality; that there is a constant and insinuating pressure to lower the quality of goods, to pare down and adulterate; that the consumer is easily deceived into taking competing articles of "no real merit"; and that the system of fixed prices for identified goods serves as protection to the consumer, a guarantee of good quality.

No observer of the existing system will deny that the matter of maintaining quality is a serious one. There is a constant tendency to nibble. Shoddy goods and adulterated goods are a great bane of modern industry. The jobber and the retailer press the manufacturer to lower his price, and play off one manufacturer against another. There are dealers who persistently suggest a shading of quality here and there, a bit of poorer material, a cheap ingredient, and all with the same fair externals,—no one would notice the difference. It is not unnatural that the manufacturer who is conscientious and also far-sighted should set his face against moves of this kind, and should approve a system which promises to assure him his price and enable him to stick to his standards.

Nevertheless I question whether the system of price maintenance serves in any considerable degree to keep up the quality of goods; and I question still more whether it is the best way of keeping it up.

So far as I can judge from observation and inquiry (my own inquiry can not pretend to be more than cursory), these identified and price-fixed articles are sometimes excellent, sometimes good, sometimes ordinary. The verdict of unbiased and well-informed

observers seems to be that they are usually good; occasionally of really superior quality. As a rule, the purchaser is safe in buying them; but often he pays a liberal price for the insurance. Substitutes as good, but less widely advertised, can commonly be had at a price no higher, sometimes at a lower price. Not infrequently, the situation is the reverse of that implied in the quality argument: the much-advertised identified article with its set price, so far from being particularly good, is mediocre. There seems to be no uniformity in the outcome, and certainly no assured protection for the purchaser.

The whole question of the maintenance of the quality of goods is a perplexing one. How far is it expedient to let the purchaser judge for himself, how far expedient to hedge him in with safeguards and restrictions? In the process of experimenting with different goods and suiting different tastes, of adaptation to different needs, is it not best to let him buy what he likes and to take his chances of making mistakes? As regards some things important for health, drugs for example, or fresh milk, no one questions the desirability and the feasibility of setting up rigid standards and of compelling absolute conformity to them. As regards articles of food, we can require that they shall be what they purport to be,—that chicory shall not be palmed off as coffee or margarine as butter. But as regards a multitude of goods, probably the great mass, there can be no hard and fast standards. How much jute and how much cotton and how much wool should there be in a carpet? What flavor and composition should a tooth-paste have? Just how durable should be the leather in a shoe? How accurate a time-piece should a watch be? There are matters on which it would seem that the purchaser must be left in the main to judge for himself,—to compare price with quality, to consider for what sort of use and for what period of use he wishes the article. Neither an all-regulating government nor a benevolently disposed manufacturer is likely to settle them as much to his satisfaction,—his real and ultimate satisfaction, including that of having his own way,—as his own free choice, foolish though it may seem to another. In the course of the discussions of the set-price system, there have been on this subject some curious statements or implications. It has been said on the one hand that the retail dealer is the proper or responsible guardian for the purchaser; on the other that the maker of the identified article should act *in loco parentis*. The alternative, it would seem, should be put differ-

ently: either the public itself, i.e., the government, should intervene as guardian, or the purchaser should be left to take care of himself.

The argument concerning the ways of maintaining good quality seems to me applicable, not to price fixing, but to another practice usually allied with it and often confused with it,—namely, the protection of brands and trade-marks. The solid ground for legal support to trade-marks is that an inducement is thereby given to make satisfactory articles and to continue making them. Turn out that which satisfies the customer, mark it for easy identification, and he will ask for it again; a process which is defeated, as regards the inducement to maintain quality, if some one else is allowed to use the trade-mark. And it is this general situation—that it pays to make a trade-mark article good and to keep it good—which is *the* factor making for the quality of identified articles. The maintenance of retail prices seems not at all essential. There are any number of articles which have been sold under a trade-mark year after year, generation after generation, without any dictation of retail prices and also without any deterioration in quality. I take it that the trade-mark articles for which no set-price arrangement has been attempted far exceed in number and in commercial importance those to which it has been applied. It is a minority even among the identified goods which come within the purview of the system. Yet the long-run profitability of keeping up the brand suffices for the maintenance of quality.

On one phase of the trade-mark situation and its relation to quality there may be room for improvement. The practice seems to have been extended of late years. Any one can register a trade-mark and try to "develop" it. Many a jobber bethinks himself of having his special brand; sometimes even the ambitious retailer. There may be herein a dispersion and loss of responsibility, and so of the inducement for maintenance of quality. The merchant's business is by its very nature one from which it is comparatively easy to withdraw. The manufacturer, on the other hand, is committed to large investment in plant. On general principles the trade-mark system might be expected to work out its best results if its use were limited to those who really made the goods and felt the sobering influence of heavy permanent investment. The manufacturer who puts on his goods any and every kind of trade-mark which a jobber may ask, will scamp the goods as much as that jobber directs; while the latter, easily able to withdraw from arrangements that he finds unprofitable, feels no such responsibility

and no such inducement as he would if he had to "stand by" the goods for a definite period. I would not undertake to dogmatize on this matter. Some jobber's brands have been long maintained, and have proved themselves trustworthy certificates of good quality. Others have been worthless to the consumers and demoralizing to the trade. The problem would seem a fit one for systematic inquiry by such a body as the Department of Commerce or the Federal Trade Commission. I refer to it only by way of illustrating the relation between trade-marks and quality of goods, and the way in which the public has a real concern in the process of having goods "identified."

What now is the public interest as regards the other side of the situation as we have analyzed it,—the marketing side? The manufacturer, to repeat, is under strong pressure to accept and even to sustain the existing system of distributing goods. He finds it good business policy to coöperate with jobbers and retailers by maintaining their traditional margins of profit. Is there any reason why he should or should not be allowed to do so?

On this score it is often argued that the cutting of prices by retailers is deceitful or fraudulent. The customer, we are told, does not really gain. The identified and well-known articles are used as "leaders,"—mere bait to lure the purchaser. The price cutter makes up for the low prices of these by higher prices on others, whose quality or "fair" price is not readily ascertainable. The ordinary purchaser, we are told, is a most gullible person; the shopkeeper can turn him about very much as he pleases; it is said to be to his permanent interest that the shopkeeper should be held strictly to selling him a good article at a steady, reasonable price.

This goes back in part to the question already considered,—how far the purchaser is gullible, how far and how long the retailer really is able to deceive him, whether he is to be left to learn for himself, in what way honest dealing is best promoted. Legislation may possibly be devised for the prevention of competition really predatory in character,—competition deliberately designed to mislead the purchaser by offering low prices on one article with the intent to make up a loss through higher prices on others. Similarly it is conceivable that we may enact laws—after the German pattern—against deliberately mendacious advertising. To frame laws on matters of this kind is a most delicate and difficult task; to administer them with effect is even more difficult. Probably we shall

have to content ourselves with the conclusion (or assumption?) that the ordinary purchaser is not endlessly gullible, that the predatory dealer is likely to overreach himself in the end, that honest business pays on the whole; and, on the other hand, must face the certainty that so long as we maintain an industrial order resting on liberty in getting and spending, some remnant of shady dealings will inevitably persist. But all such speculation suggests once more that the remedy for the evils should be taken up by public authority, not put into the hands of the manufacturers and retailers through a system of price prescription. They are after all interested parties, and a system of prescription by interested parties is objectionable.

I have suggested that the regulation of "unfair" competition should be by public authority. It may be further suggested that here is again a topic on which investigation by public authority might clear the situation. *Is* it usually true that the price cutter makes up for the low prices which he parades on the well-known identified articles by higher prices on others? Or does he get the *same* prices (the usual retail prices) on the other goods, and thus give the purchaser a net gain? Is his advertising of cut prices deliberately deceitful? Now on a matter of this sort we are usually told—and I think with truth as well as with sincerity—that on the whole dishonest business and mendacious advertising do not pay. Advertising in general is said to be a means of giving information to the purchaser, not of defrauding him. This is doubtless the case with most advertising of identified goods. It is probably no less true that the advertising by the price cutter conforms to the rule that it is honest business that pays in the long run. On such general grounds it may be maintained that he does not ordinarily outwit or defraud the purchaser; he attracts custom, enlarges his scale of operations, and brings down his overhead charges. But this is a question on which we are much in need of further data. Detailed specific study of retail methods, of costs and prices in different kinds of establishments, would throw light on it. To repeat, our new government agencies—the Federal Trade Commission or the Department of Commerce—might advantageously take it up for systematic inquiry.

It will not be seriously contended, however, that the general attitude of business men is based primarily on their concern for honest retail trading and for the consumer's protection. That concern no doubt is genuine; but it would be an obvious exagger-

ation to describe it as the main force behind the opposition to price cutting. Much more important, in my judgment, is the reluctance to admit a disturbance of familiar and settled arrangements. In this regard the position of the manufacturer must be admitted to be difficult. He is confronted with a condition, and is not unnaturally impatient of theory. The mercantile middlemen—the jobbers and the retail dealers—are at odds among themselves, and their conflicts react on the manufacturer. The great majority of them, both wholesalers and retailers, are at heart opposed to price cutting, and give their support most willingly to the manufacturer who joins with them in endeavoring to prevent it.

The merchants of both classes are disposed to believe that the methods of business to which they have adjusted themselves are good and right, are difficult to improve, and should not be disturbed. They are disposed to believe, too, that their sources of gain are but moderate, and if changed at all should be enlarged rather than diminished. This attitude is not at all singular. Lawyers and judges believe that the law's delays, so irritating to the layman, are essential for the due administration of justice; and they believe that legal fees and expenses are no more than reasonable. Professors resent with indignation any "efficiency inquiries" concerning their working routine; and opinion in academic circles, it need not be said, is unanimous that the pay in this occupation is quite unreasonably low. Similarly the great mass of merchants are united in a consensus of opinion that their existing methods are as well devised as is possible, and that current profits are no more than reasonable. Innovators are believed to be engaged in improper or illegitimate business. For example, the jobbers, and not infrequently manufacturers also, have maintained that the large retail stores and the mail-order houses are not entitled to buy directly from the manufacturers at manufacturers' prices, because these are not jobbers and have no "right" to be treated as jobbers. And similarly the retailer who cuts a price is said to be selling at less than a "fair" price; he cannot possibly do it at a "fair" profit; it is not a legitimate way of doing business. The opposition to price cutting is very largely, if not mainly, opposition to disturbers and innovators.

Now the traditional ways of distributing goods are in a stage of flux and transition. One of the things borne in on us by the business studies and statistical researches of recent years is that the process of getting goods from manufacturer and grower to con-

sumer is extremely costly. The spread between the price received by the prime producer and that paid by the consumer is astonishingly large. Various experiments are on trial for lessening it. Co-operative shopkeeping, heralded in earlier days as a saving means of social salvation, then pooh-poohed for a period as inconsequential, is coming again to be considered with respect as one among possible devices for "lowering the cost of living." Another form of coöperation,—coöperative selling by agricultural producers,—is expected by some careful observers to enable the growers to dispense, at least in some degree, with jobbers and commission merchants. The parcels post,—a blessed boon, whatever errors may have attended its initial stages,—will have larger and larger effects on shopping methods and selling methods. The department store grows apace. The chain store plan has its successes and its possibilities. Mail-order business seems to be in that early phase of an industrial improvement in which the pioneers reap unusual profits. The inquiries made by the Department of Agriculture on the market distribution of some articles of food may point the way to a better organization; and the same is true of the systematic inquiries on retail accounting and retail selling conducted by the Harvard Bureau of Business Research. In every direction are innovations, investigations, and experiments. ✓

What will finally come of all this, it would be rash to predict. The jobber may remain; the country storekeeper is not likely to disappear; retailing on a modest scale has shown a tenacious vitality in face of the attacks of the department store. There is no possibility of saying in advance just what the situation will be a quarter century or half century from now. But the only promising way of getting a more effective distributing process is to let any and every experiment be tried by any one who thinks he can do the thing more cheaply. And this would seem to be a decisive reason against encouraging the fixed-price system. It stands in the way of the experimenter. As regards the spread between producer and consumer, it looks to the maintenance of the *status quo*.

One cannot but feel sympathy for the manufacturer who urges that he is not directly concerned with the profits of retailers or personally disposed to sustain existing ways. The present marketing arrangements have not been made by him; they are simply accepted as they are, and the price determinations are allowed to fit into them. This position, it must be said, is not often taken overtly. The supposed protection of the purchaser against the

"dishonest" or "unfair" retailer bulks more conspicuously in the current arguments for price fixing. But I suspect that frequently the manufacturers say to themselves that after all this is in the main not their affair; it is chiefly a matter of internecine struggle between retailers and jobbers, from which the prime producers simply wish to extricate themselves without damage. The motives which influence men are often obscure to themselves; nor are they to be accused of insincerity if their own version of reasons and motives is not accepted without reservation. At all events, I can imagine that a manufacturer for whom the marketing difficulty is serious should be at bottom indifferent about the price at which the retailer sells his goods, and yet should feel himself compelled to take a hand in regulating it; half conscious all the while that he is bolstering up a system whose general serviceableness is doubtful.

I am bound to say that all the evidence we have indicates that the heavy spread which obtains in market distribution is not likely to be much reduced. Large as it is, it seems to be in the main inevitable. The fraction which the shrewdest and most energetic endeavor can lop off is after all a comparatively small one. The greatest constituent in it is the retailer's spread,—the gap between retailer's buying price and selling price. Under existing habits and traditions it is not probable that any device,—department store or cut-price store or coöperative society,—will cause this to be very much lowered. I say, under existing habits and traditions. If we were willing to change our accustomed free and easy ways, the possibilities of saving would be considerable. Imagine, for example, that every one intending to buy a pair of shoes or a suit of clothes were called on to send notice of his proposed purchase a week or two in advance, to give a preliminary account of the thing wanted, and then to accept an appointment for a stated place and time at which the purchase must be made. It is easy to see how the work of retailing could be systematized, how the selling force could be kept constantly employed, how stocks could be kept to the minimum. As things now stand, we pay heavily for the privilege of freedom in the use of our time, for vacillation and choice, for the maintenance of a stock and a staff adequate for all tastes and all emergencies. It is common to speak of the waste of competition; much of it is in reality the waste necessarily involved in liberty. Almost any shop could make marked savings and reduce its prices considerably by such simple methods as dis-

pensing with delivery and insisting rigidly on cash payment: let the customer pay on the spot and carry his goods home with him. Yet it seems impossible, even in the poorest quarters, for such a shop to hold its own against competitors more expensive but more complaisant. A well organized socialist state could manage all these things much more effectively and economically. But! in any socialist state, however well organized, the individual would have to take those goods which were put on sale, and to take them at such time and place as seemed good to the managers, and in such quarters as they designated, with no opportunity of turning to some one else whose terms and methods might be preferred. One could digress at length on these topics; nor do I wish to commit myself to the conclusion that a more taut and shipshape organization necessarily would mean a net deduction from the sum of human happiness. I only note that the present system, anarchic and ill-adjusted as it may be, does give a freedom of choice which men (and women) seem to prize highly, and that it entails all the expense of that liberty.

For these reasons, further, the matter of price maintenance and price freedom does not seem to me of the first importance. The difference in expense to the public between the fixed-price plan and the price-free plan is probably not considerable. It is entirely true, as the advocates of the former insist, that competition would remain in effect between the various identified and price-maintained articles, and that if one maker of garters (say) should fix his retail price so high as to enable him to reap great profits, a rival would come in with another brand at a lower price even though also fixed. The problem,—to repeat what I said at the outset,—is quite a different one from the trust and monopoly problem. It is essentially that of the method by which market distribution shall be carried out, and of the extent to which we shall enlist competitive freedom for cheapening the methods of distribution. These methods are expensive, and they seem to be inevitably expensive. Yet the circumstance that the process is necessarily dear is no reason why it should be kept just as it is, or why we should stand in the way of endeavors to make it less dear. There is no indication of any revolutionary overturn; perhaps the most far-reaching change in sight is the partial elimination of the jobber. All we can expect is a constant experimenting, a steady nibbling of expenses, a slow and irregular narrowing of the spread. This much is worth while, even though no more magical in its effects than any

other of the devices which would lower at once the cost of living. Half a loaf is better than no bread.

My conclusion is that the case in favor of price maintenance is not made out. There is no public gain from giving an article an outward appurtenance of special merit. There is still less a public gain from compelling retail dealings to be conducted in the good old way and at the good old expense. The price-fixing system would not indeed seem to be so dangerous as to call for penal treatment; it does not portend such large social and economic difficulties as the monopoly and trust. The common-law mode of dealing with contracts in restraint of trade suffices. Treat the arrangements as contracts of this kind, not criminal in their nature and not to be hounded down, but unenforceable in the courts. Let the retailer sell as he sees fit, and continue to trust in the efficacy of competition for cheapening the methods of distribution, and in the good sense of the purchasing public for assuring to them goods of the kind they really want, and at prices which are really advantageous.

PRICE MAINTENANCE—DISCUSSION

L. H. HANEY: At the outset I must question the implication that price maintenance would mean a maintenance of the existing system of marketing. The plan of legally-maintained prices, or of legally forbidden price cutting, is an adjunct to the relatively recent increase in advertised "identified" goods, and it is seeking to gain acceptance under the guise of the new tendency to recognize various restraints of trade as reasonable. Surely, to insure a given spread of profits to the same old classes of business men is not to insure that these men will conduct their business in the same old way. Making due allowance for exceptions, the existing system is characterized by the prevalence of responsible retail entrepreneurs, and by the general acceptance of the competitive ideal. Price maintenance would, where applied, take away from marketing all but the form of entrepreneurial activity, and it would remove an essential element in competition. As a rule, "identified" goods, such as Dr. Miles's "remedies," are actually sold, title passing to the dealers, and the jobber or retailer runs, or may have to run, all the risks of not disposing of them at a profit. Indeed, what the price-maintenance people are asking is to retain the *form* of the middleman system, while themselves absorbing a large part of the middleman's job and profits. The manufacturer is to determine quality and price and middleman's profit, and is to provide the advertising campaign. Then the retailer is to buy such a quantity as he desires, or as the manufacturer persuades him he can sell, and is to take his chances on being able to dispose of it at the price fixed and maintained by the manufacturer. (Of course this eliminates price competition among retailers.) All this would tend to reduce the importance of the business establishment as a unit and of business-unit competition; for retailers would not be free to treat the various items of their stocks as aggregate units. If they desire to sell out at reduced rates a line judged less profitable than another, or if they desire to adopt the "leader" policy, they are estopped by the law.

Again, price maintenance would seriously hamper the working of cost forces. To sell at one price, regardless of shipping charges or volume of business, may be profitable to the advertiser, but it is not good social economy. Mr. Ford has been lauded for refusing to make reduced rates on large orders from Europe, and the Kellogg people have laid their wares down at all points at one price, themselves absorbing shipping charges. This gives the manufacturer greater power to discriminate against nearby points and large buyers by maintaining a flat price.

Suppose that the price-maintenance system were generalized,—an excellent test for bringing out incompatibility between individual and social interests. The following situation would arise: All products would be identified (as to package or container, at least), and all would be advertised and sold under some trade name or brand. All would bear prices named by the manufacturer or some producer in the early stages. As a result, marketing would be dominated by the manufacturer, who would do the advertising and name the price to the consumer; and retailers and jobbers would become mere joint agents, distributing their products for various manufacturers at fixed rates of commission. Business-unit competition would be reduced, and manufacturers would be encouraged to collect differentials from near points and large buyers.

As to the kind of competition that would remain, the advocates of price maintenance do protest much that it would not be decreased. A letter sent out by the so-called American Fair Trade League says: "The truth is that a uniform price on a standard article directly encourages the kind of competition most valuable to the public. It invariably forces other manufacturers to compete in quality for the consumer's favor. . . ." You will note that the League is able to distinguish different brands of competition and to pick out just the one most valuable to the public. But I would call attention to the false notion of competition implied in the foregoing statement. Competition can hardly mean much unless it embraces both quality and price; for quality and price themselves mean little unless taken together. "Price" means nothing except as the amount paid for a definite quantity of a definite quality of a good; a quality is economically unimportant except as associated with price per measurable unit. What do the superfine qualities of Cuticura soap or Gillette razors mean aside from cost per piece? Competition that does not work for an adjustment in and between both elements in the exchange is partial and imperfect. Assuming that in some abstract way quality would be secured by such competition, we should have no guarantee of economy.

Not only would such competition be incomplete, but, as a moment's reflection upon railways, drugs, and cigars will show, we can not count upon competition in quality to insure even quality,—any more than we can count upon competition in general to insure fair rates. After years of competition in service alone, the railways have to be compelled to be cleanly, safe, punctual, and convenient. Does anyone here believe that Peruna and Cuticura will do what they are identified as claiming to do? Does the normal course of quality in cigars not remind us of the Roman Empire? It is specious to point to poor or

adulterated goods sold in bulk for the purpose of concluding that trademarks and maintained prices are the remedy.

The fact is that the proposed system takes the emphasis off quality and puts it on advertising and salesmanship. To fix a legally enforceable price as a means of securing quality is to invite the policy of putting the price as high as the "traffic will bear" and of advertising heavily to turn the stock over at that price; while quality, after all, remains at the mercy of commercial exigencies. This attempt to make quality depend upon price gets the cart before the horse. The logical way to maintain quality is to make price depend upon quality, making quality the means of securing sales. In this way, the price is necessarily related to the character of the good.

The old cracker-barrel system of retailing obviously falls short in that it leaves too much to the consumer, and the connection between quality and price can be too easily broken by the careless or dishonest retailer. The new sanitary-package system leaves too much to the wiles of the advertiser and to the honesty and care of the manufacturer. Neither system is safe. Professor Taussig indicates the wise course: In case of goods that are vitally essential to society, we cannot trust quality to the vicissitudes of competition at all. Here is the proper sphere of pure food regulation. For the rest, the system which, *while giving him the fairest chance to compare quality with price*, throws the responsibility upon the buyer, is, in my judgment, best. Because of the abuse of advertising which it is apt to bring, I am inclined to think that the price-maintenance system is not the best.

The great change in the old system of marketing is due to the development of advertising, a fact which is illustrated by the solicitude of the manufacturers concerning the maintenance of retail prices. I would even go so far as to say that it is not the manufacturers, as such, but rather the advertisers, who are back of the Stevens Bill and the propaganda for the protected price system. There is no lively interest in maintaining prices in general, but only the particular prices of certain "identified" goods, and these goods have been identified only by means of advertising. Merely to register a trade-mark is but to create a potentiality, and the value depends upon the publicity that is given. More than this, the process of maintaining prices would depend upon the activity of the producer in creating and maintaining a demand sufficient to sell his wares at the price fixed, i.e., upon advertising. *Vice versa*, the legalization of price maintenance would give a great incentive to advertising, both intensive and extensive, by making the prize of the successful advertiser greater and more secure.

To my mind, the whole propaganda under discussion begins and ends in a veritable apotheosis of advertising. It is essentially connected with the idea that anyone can take anything, calling it any name,—from Zu Zu to Dr. Pierce's Favorite Prescription,—and by continuous repetition and suggestion so work upon the "public" as to "create a demand,"—so the cant phrases run. Then the advertiser is to be guaranteed a vested interest in that demand.

If you assume "identified" articles and the power of advertising, and if you grant power to the manufacturer to fix a price and to control the dealers' margins, then you have a situation which amounts to government guarantee of profits on advertising.

It is argued that the manufacturers of the Perunas, Spirellas, Cuticuras, Victrolas, Unedas, Wrigleys, Schlitzs, Sanatogens, Ingersolls, Duffeys, etc., have spent hundreds of thousands of dollars in advertising campaigns and have really done their own selling; that it is unfair to allow another to cut the prices they have made, and deprive them of their markets. This argument I believe to be unsound for two reasons. In the first place, I do not think that a really good thing is ever seriously hurt by price cutting. The baneful effects of price cutting lie largely in the minds of those whose goods are known by their advertised rather than their real virtues. Does anyone think the less of Listerine, or Colgate's, or his Ingersoll watch, because he got them at a bargain? It is the overrated product that suffers. For example, not long ago there appeared in *Everybody's Magazine* a series of articles on "Better Business," in one of which the sad fate of Cosmo Buttermilk Soap was bewailed at length. Its fair fame, "built up" by advertising exaggeration, had been damaged by making it a "leader" at the department stores, nor could all the king's horses and men rebuild it. Does one need to ask why? You scarcely require to be reminded that it was "Sanatogen" which was involved in the recent Bauer Chemical Company case. Sanatogen is a much-advertised product. Its merits have probably been grossly overrated. These cases make one wonder if it is not generally that part of the price that is puffed up by means of advertising that is hurt by the cutting.

In the second place, even if good things might be injured, it seems to me that there is nothing in the motive nor the final result of the price cutter's activity to warrant the interference of the state. But Professor Taussig's paper covers this point.

In any case, the argument proves too much. The secretary of the Fair Trade League, in a letter already referred to, says: "The confusion of the consumer by the destruction of standards of value permits

every sort of public exploitation and deception through dishonest advertising." But what assurance have we that the manufacturer's advertisements will be more honest? If the public is so easily duped by the price cutter as the argument implies, how much more helpless will they be before the subtle suggestion of the price maintainer's advertising expert. Surely we could not intrust them to a system in which advertisers controlled the selling price and the quality of the things that they advertised. Or, if the public is not so gullible as implied, then they do not need the protection which the price maintainers are so eager to extend to them.

Before passing to a brief summary, allow me to observe that in my economy based upon free valuation and choice by individuals, it is essential that the individual be given a chance to choose intelligently. This is a part of the ideal of equal opportunity. It is blind folly to prate about individual rights and mean the right to be defrauded by "inside" manipulators and by patent-medicine ghouls. Pure advertising is not restriction; it frees the masses to choose on the basis of truth. Perhaps the most serious error in this much-beclouded issue is the assumption that "manufacturers who have spent much time and large sums of money to establish favorable reputations for products bearing their names, or trade names, positively cannot afford to misrepresent their goods to the public or allow their lines to fall below the standards they have established."¹ There will always be a new name to try; there will always be a new generation; there will always be the ignorant. We know that one way to make money is to shift continuously from one brand to another, wrecking each in turn.

I can best sum up the case by stating that from the standpoint of public policy two main arguments are made in favor of price maintenance: (1) that it is a means of securing better quality, and (2) that it is desirable as a piece of justice to manufacturers who are liable to lose markets through price cutting.

1. As to the quality argument: (a) The government is asked to back the measure, which raises the question, would it be wise for the state to take upon itself the maintenance of quality? This is more than doubtful; but, waiving this point, (b) would the best way to maintain quality—whether by the government or not—be to allow private business men to control marketing by fixing prices for other business men? My conclusion is that, if such a policy were generalized, we should be forced to resort to regulation to insure a relation between quality and price. (c) Therefore, the best way to get quality is the direct way, which means, first, effective pure-food and drug legislation; second,

¹ *Holland's Magazine*, Oct., 1915.

pure advertising; and, third, pure trade-marks. I believe that the last two come to the same thing, and that pure advertising is both more fundamental and more feasible. It would take away from the socially undesirable trade-marks the chance to prosper.

2. As to the justice of protecting manufacturers: In my judgment one would be safe in challenging anyone to produce a single case in which a socially desirable good that sells on its merits has had its market seriously damaged by price cutting.

W. F. GEPHART: Modern industrial society has become so complex, and individual business welfare so dependent upon the conduct of others, that the political organization of society is being constantly called upon to aid in securing ends for a particular group which that class often sincerely conceives to be for the public welfare.

There is great temptation, therefore, to assign an efficacy to governmental activity which it does not possess, either because of the nature of political institutions or because of the character of the phenomena which is sought to be controlled. This is especially true of governmental activity in relation to economic affairs, and nothing is more common than the failure of statutory law enacted in opposition to economic principles. This I conceive to be very largely the situation in respect to the proposal to enact a law which according to its provisions permits "any producer, grower, manufacturer, or owner under trade-mark or special brand to prescribe the sole uniform price at which each article may be resold."

The question has arisen largely on account of two developments: first, the losses which have resulted from the excessive competition in the selling of goods; and, second, the enormous increase in the number of specialties which by an extensive development of advertising have found a large market.

The evils of a competitive system in the production and sale of goods are easily recognized by every student of economics. But what is not so apparent is the beneficent effect of such a system. Failures of manufacturers, merchants, and business firms are duly catalogued and in each case come under the personal observation of people, often enlisting our sympathy for a friend or an acquaintance. Few individuals failing in business are disposed to attribute their failure to their own inefficiency. The fault is assigned to conditions over which they have no control. It is due to the cutting of prices, to the trust, to chain-stores, to the failure of crops, or to any one of many causes, remote from the one failing.

It is not surprising, therefore, that one of these causes now frequently advanced should be sought to be controlled by an artificial method of stabilizing the fluctuating conditions in the production and selling of goods. Like many economic panaceas suggested, the fixed-price idea has considerable plausibility and such seeming fairness that it commends itself to many different economic classes. Let it be understood, however, that there are three distinct classes directly interested in the suggestion: the producer, who is its chief promoter and beneficiary; the distributor, the second claimant to benefit; and, finally, the consumer who is the residual legatee. Let us examine some of the more important arguments adduced in favor of the fixed-price principle.

It is said that under such a system the distributor would be assured a fair profit whereas he now frequently does business at a loss and is often forced into bankruptcy. It is doubtless true that many retailers, probably the majority of them, do not know their specific costs of selling. But a system of fixed prices would not make the retailer any more efficient, nor enable him to more easily analyze his costs. Whatever losses come to the consumer from the existence of a large number of inefficient retailers would not be lessened. Under the present system the most efficient are being continually eliminated, and under the proposed system they might tend to be perpetuated, since they become in a sense the clerks or agents of the producer of the article sent to them, its price and conditions of retailing already determined.

Successful merchandising from the viewpoint of the public as well as that of the merchant consists in the ability to turn goods into cash and cash into goods. Is the retailer to be a merchant, or a clerk who hands out goods to the consumer whose demand has been created by advertising?

But even granting that a fair profit is provided for the retailer, it does not follow that the proposal is justified. This assumes some inherent merit in the system of retailing per se. It is not reasonable to suppose that the economic organization, especially as regards the distributive side, has by a process of constructive evolution arrived at a fixed point of final superiority. As a matter of fact the ability of the retailer to continue in business cannot be guaranteed by the manufacture of articles to be sold at a fixed retail price. The retailer's enterprise, his location, and many other factors finally decide whether he can continue in business. Nor is it true that by a system of fixed prices he is guaranteed a higher net profit. He may sell many other articles, for it is not possible that the situation will be reached when all the articles, even those of a small retail grocer, will be sold under the

fixed-price system. Then, too, what motives will actuate the producer of this fixed-price article to permit the retailer to have any more than the lowest possible margin of profit? It is true that the producer must have many thousand retailers to sell his fixed-price article, but frequently the retailer has no choice whether he will or will not carry in stock an article. The producer has often by a system of advertising created a demand for the article, and just in proportion as he creates a demand so in that proportion is he able to dictate selling prices to the retailer. Past experience shows that the retailer has often been compelled to carry in stock many such articles upon which the profit was below that received for other articles.

It is frequently argued that because a producer has discovered some new method of preparing a product for the market and has spent large sums in acquainting the public with it, some peculiar right in morals and law is thereby created for him whereby he is entitled to secure a return on his expenditure. But the public placed him under no compulsion to make the investment in producing and popularizing his product. He is in the same situation as most other investors are. One may purchase a public bond, another an industrial security, another invest his capital or direct his enterprise to this or that activity, each of which carries with it no guarantee of a return on the investment. It would doubtless be a great gain for society if each could direct his labor and invest his capital in such a manner that no risk is involved in securing a return. But there is no burden of duty on the consumer to preserve in business any particular retailer, group of retailers, or other business units. If fair and free opportunity is given to each to exercise his enterprise, his efficiency or inefficiency, this is all that any business class should expect.

To demand that the public select a special class of producers or distributors and guarantee returns to them without some very evident returns to the public is a demand which will not readily be met. In the case of patents, copyrights, and trade-marks some exception has been made for generally accepted benefits which are promised.

But the ordinary manufacturers and jobbers cannot be expected to be freed from certain forms of competition which operate on all. Indeed it is quite possible that even if the right to fix prices were granted, such producers would find no real benefit. Such a solution would not result in a static condition in distribution. Other difficulties would arise to plague producers of such goods quite as serious as they suppose the present difficulties are.

It is frequently argued that where a demand has been created by

extensive advertising for a certain good at a fixed price, the continued purchase by the consumer is proof of his satisfaction of the price and the quality of the article. This is attributing to the consumer a more accurate knowledge of the quality of goods than he usually possesses. Many goods cannot be accurately judged in respect to their quality either before or after consumption.

The argument is not logical in that it states that the producer could not continue to sell his fixed-price article if consumers were not satisfied with its quality and price, yet in the next sentence it is stated that the particular consumer buys an inferior article at a lower price, thus destroying the market for the superior article at the fixed price. As a matter of fact, it cannot be proved that all fixed-price articles are superior. Then, too, the consumer often continues to purchase the article simply because there is no substitute for it.

It is said that if for any reason a producer is enjoying large profits in producing an article, this fact will induce additional and competing capital and enterprise to be directed to producing this particular article. Theoretically this may be true, in the sense that there is no hard and set-fast monopoly established, at least by the aid of the law; but, practically, capital may be deterred from flowing into this channel which is already filled from the fact of a large flow of goods, the market for which is already held by a producer who by extensive advertising and organization has practically monopolized it. To dislodge this particular producer would require a similarly large investment of capital with considerable attendant risk. New producers are thus deterred from entering the field and the possessors may well occupy it and place on the market a relatively inferior good for some time; at least until the risks of entering the same field are so largely reduced that new enterprise and capital are directed to it. What the consumer has thus lost by really active competition may be very large. Whatever may be the loss of competition under our modern business organization, its beneficent results can only be secured by a condition of great sensitiveness and freedom in the movement of the productive factors; that is, permitting their free flow to whatever point in the productive process promises a better return.

The policy of fixed prices largely disregards the difference in costs to different distributors and retailers, over some of which neither producer nor retailer has any control, while others are within the influence of the distributor. Is a safety razor made in Bangor, Maine, to be sold at the same price in Bangor as in a lumber camp in Washington? What experience we have had with fixed prices does not give assurance

that the factors influencing varying costs in retailing would receive consideration. The system is one of a rigid, unvarying, one-price-to-all character. Producers who argue for fixed prices assume to know at what price their product should be sold. The production cost on which they have certain knowledge is assumed to be governed by the same principles which determine distributing costs. It does not follow that a retailer is doing an unprofitable business simply because he cuts a price on an article which the producer wishes to have sold at a certain fixed price. The retailer with a varied line of goods should be as free as any other business man to determine the methods and conditions under which he shall transact his business. He may consider it good business to sell an article near, at, or below its cost to him. It is only important for him as a business man to please his patrons and secure a net profit on his business as a whole without any respect to the particular article. Were it possible, the farmer, the teacher, the minister, and other producers would hail with delight any law which would aid them in securing a market for their wares at a satisfactory price. It is well known that in the final cost of many goods the actual production cost is a minor part. But however much we may lament the toll taken by the present middlemen, the jobber, and retailer, little could be gained by the consumer if he were to exchange for the present toll-takers a new toll-taker, the producer.

Finally, even granting a beneficent effect to the principle of fixed prices for the producers of trade-marked and branded goods, why should the benefits be limited to this particular class of producers? A questionable result of modern merchandising has been the enormous development of special brands. Since the devising and registering of a trade-mark or brand is comparatively easy and simple, there would doubtless be a further extension of specialties of all kinds. We might well be buying at a fixed price, Sunkist oranges, Rocky Ford cantaloups, New Jersey potatoes, and Maine sweet corn, under the protecting control of our federal government. There would nevertheless remain a large group of producers whose goods would not lend themselves to this method of distribution and hence they could not secure the assumed benefits of the legalized practice.

There are no examples where any effort to fix prices in trade for long periods have been successful. Such attempts have always laid the foundations for secret price cutting and have incited the worst evils of underhand competition,—the ends sought to be avoided by the system of fixed prices.

The method of distribution now prevailing,—namely, the use of

manufacturer, jobber, and retailer,—rests solely upon the basis of economical distribution, and the present system must be displaced whenever a better or more economical method is devised. But to grant to manufacturers the boon of authorizing them to accept payment for their goods and yet control the disposition of the goods would seem to be so far-reaching and so arbitrary a placing of power in the hands of the producer that it would amount to a business revolution.

Vesting manufacturers with the authority to control the resale price of their products enables them, through the power of advertising, to create a demand for their merchandise, irrespective of its real intrinsic merit. The cost of advertising in many cases amounts to as much or more than it costs manufacturers to produce the merchandise, but the advertising adds nothing whatever to its merits. With capital to advertise, and with the power to regulate prices, it places in the hands of manufacturers, as a class, the ability indirectly to tax the consuming public.

Summarizing, it is therefore contended that:

1. The proposal is contrary to accepted methods of producing and distributing goods. It would tend to counteract the good features in the present system without correcting any of its well-recognized evils.
2. It is class legislation of the most vicious kind in that it applies only to a certain number of the producing group.
3. It seeks to produce a state of equilibrium in the midst of fluctuating economic phenomena over which no certain human control can be established.
4. It will probably produce no beneficial results for the particular classes for whom it is desired.
5. It is not practicable, for its observance cannot be enforced. It will invite evasion by one method or another.

J. R. TURNER: This excellent and important paper is especially timely, for it gives us an able contribution against price maintenance at a period when legislators and the public are eager to see the problem from all angles.

If I properly interpret, there is a fundamental assumption upon which the arguments of this paper are constructed. This assumption, unsupported by evidence, is that maintained prices are high prices. True, the assumption is not given expression, but it is all the more deceiving for that reason. This assumption is against the weight of such authority as we have. This is a question of fact, and until a

reasonable number of price comparisons, based upon the relative qualities of goods, are made, the assumption seems unwarranted as a basis of argument. It assumes that which is to be proven; yet, if I interpret correctly it underlies both the psychological and the marketing arguments.

The psychic principle of prestige prices is found in both competitive and monopoly prices, in maintained and unmaintained prices. The paper has correctly defined price maintenance as competitive in nature, yet it illustrates prestige prices by means of virtually a monopoly product, diamonds. Is not this principle particularly applicable to unstandardized goods? Individuality and distinctiveness are emphasized by the particular stripe, cut, or quality that is uncommon. Standardized wares, made according to the commercial pattern, have the effect of a common five-cent fare on a street car,—all customers are put on the same plane. Standardization works toward equality, but it is only upon standardized goods that price maintenance is or could be practiced.

The dollar watch, the Ford automobile, and some other inexpensive commodities are goods whose makers have fought most earnestly for price maintenance. Neither the love of ostentation nor an appeal to vanity figures in their cosmopolitan selling campaigns. Maintained prices are a part of a selling campaign, and the manufacturer of the average commodity could not more effectively defeat his own purpose than to make his selling campaign uncosmopolitan. I suggest another basis for this policy, that of the protection of good-will in the operation of nation-wide marketing.

Professor Taussig would protect trade-marks, limit them to the producer, and legislate for standardization where feasible; otherwise he urges that "the purchaser should be left to take care of himself once for all." I assume that the way to protect a trade-mark is to protect the substance of which it is a mere symbol. The good-will, workmanship, and quality of a ware, and not the trade-mark badge, are the significant things. Qualities and quantities may and do vary while the trade-mark remains the same. Price maintenance on a competitive basis goes deeper. It enables good-will and quality to be maintained and improved. At the same price and under the same trade-mark, for instance, a package of Kellogg's cornflakes was, under the force of competition, both improved and doubled in weight.

Competitive price maintenance would seem to guarantee low prices, for there is no condition in which the full force of unrestrained competition can more effectively operate. The fact of knowing precisely

what is to be met, the privilege of analyzing a good as to quality at a uniform price, are spurs to competitors. They are given a standard to be excelled. The producer must, in the face of threatening competition, render his best service commensurate with the price. The competitor fixes the price at his own peril; if too high, purchasers will refuse to buy and competitors will do the rest.

Price maintenance is an antonym for price discrimination. A prescribed price which stands the test of time under competition is a reasonable guarantee to the child or other unskilled buyer. We sanction the advice to let the purchaser take care of himself, but we hesitate to deny him a means to that end in a market whose endless complexity makes skill in buying a distinct asset. Prescribed prices are an educative means of protection. They are standards for pricing all goods, whether price-maintained or not.

The effect of prescribed prices on the cost of marketing is easily overstated. They are feasible on but a limited number of goods, and are desired by only a few producers in any line. As a rule the producers accept the market as ready-made, depend on the middlemen to distribute their output, and very frequently prefer to produce for the middleman's own trade-mark. It is against the policy of this large class to prescribe prices, and in many cases *it would prove fatal to their business to limit trade-marks to the producer.*

Arguments for market reform are generally aimed in the wrong direction. Stores are made for consumers, and distributive agencies are shaped to meet buying habits. Modern homes have inadequate storage facilities; the function of cellars is to house the furnace and coal. The consequence is small purchases and the habit of living out of paper bags. This converts retail stores into supply stations or storage houses from which small and frequent deliveries are made. The cost of these agencies is increased by multiplying their functions. Reform is to be sought in attacking the causes of these costs rather than the policy of price maintenance. The aim should be to educate buying habits that will permit common deliveries and scientific organization on the basis of higher functions.

While price maintenance may have but little influence on intermediary costs, may not this policy tend rather to lower the cost of marketing? Haphazard prices provide numerous crevices for the small shop, huckster, and push-cart vender to eke out a living. Well known uniform prices tend to iron these out. Cut-prices needlessly multiply selling agencies at times by causing producers to provide their own means of distribution. A cheap selling force can handle well known

goods with established prices. The manufacturer's welfare depends on the consumer's satisfaction as to price and quality; his ambition is therefore to reduce middle costs to a minimum. "Squeezing the middle-man" is a common phrase in the market. Price maintenance gives power to the producer to reduce marketing costs because his advertising and price fix the consumer's demands and, in turn, these demands stock the store.

There is danger in prolonged experimenting. Past experimenting has taught two lessons: (1) Competitive evils often intrench themselves in industry. They tend to deepen rather than to vanish. (2) Public opinion will not lie dormant when evil is threatening; it will not wait twenty-five or fifty years to see what is going to happen. The legislation and decisions on unfair trading since 1890 are proof of this. The problem involved in price cutting is no less serious than the permission to parasitic agencies to deaden productive initiative by appropriating the good-will of the producer.

The problem of marketing permeates all industry. All produce for the market. Every commodity is from the moment of its existence a demand for another commodity. To isolate this problem is fatal to clear reasoning and insures distorted conclusions. May it not be that the arguments here emphasized are but incidental to a profounder consideration? I refer to good-will, which is at the heart of a group of principles vital in nature: private property, initiative, thrift, and fair competition. The expansion of local markets into national and international markets requires the circulation of information about goods, but the first question the buyer asks is the price, therefore a part of this information is the price. Further, the producer cannot go with his wares, but his good-will is inseparably connected with them. The right to own the private property of good-will carries with it the right to protect it. But where price cutting is recognized the producer's good-will may become his own worst enemy,—a force to drive him from the market. Kellogg's brand in one store begins cutthroat competition, not with other brands, but with Kellogg's brand in another store, with the result that Kellogg's drives itself from the market.

A cut-price on goods, well known for their quality and price, is most attractive to the bargain hunter. If, as an advertising scheme, the large store underprices the Ingersoll watch, little stores discontinue its sale. They cannot tie up capital in a no-profit line. Meanwhile the parasitic dealer has appropriated the producer's good-will as an advertising scheme. The price cutter will discontinue the article as soon as he reaps the advertising effect. Not to do so would make of the

price cutter a commercial zero. Or, if cut-price goods are not actually abandoned, there are instances, like that of the Hoosier cabinet, where a few of them are carried and the "prospect" is switched to a similar good on which there is a long profit.

The essence of action in a long line of cases on unfair competition is damage, not to trade-marks as such, but to good-will or reputation or trade. Trade-marks are but symbols of good-will. To defend trade-marks and not to defend prices is frequently a contradiction in terms, for price maintenance under open competition results in fair prices, while price-cutting is a trade pirate's two-edged weapon to secure profits at the expense of another and to destroy the essence of which the trade-mark is a symbol. The private property of good-will is inseparably connected with thrift and individual initiative. Any system is deadening to these which enables one to reap what another sows.

PAUL T. CHERINGTON: Many efforts are now being put forth to make American business more scientific. It augurs well for the future of such attempts when an acknowledged leader among economists turns his attention to so intricate a problem of everyday business as price maintenance. In the course of time, when the body of fact material becomes adequate, such problems will take their place among the most important with which economists have to deal. This gives Professor Taussig's paper more than usual significance.

The paper is divided into four parts: (1) a definition; (2) a statement of the case; (3) a sitting in judgment; (4) conclusions.

The Definition.—Professor Taussig defines price maintenance as "the practice among manufacturers of prescribing the prices at which their wares shall be sold by retail dealers."

This definition is not a complete statement of what price maintenance is, nor is it accurate as far as it goes.

The first serious objection to Professor Taussig's definition is connected with his idea that the manufacturer alone dictates the price. He may or may not do so. Price maintenance ordinarily takes a form in which the resale price is the subject of a contract or agreement between the manufacturer and one or more distributors. Furthermore, this ordinarily is an agreement not upon a price arbitrarily set, but upon one of certain generally accepted prices for kindred goods. This price, it is stipulated, is to be received for the goods in question upon resale. Obviously the choice is not between the manufacturer on the one hand or the consumer on the other hand determining the price, but it is between the manufacturer and one or more of the distributors in

agreement together on the one hand, and the final distributor (or retailer) alone on the other. This right of the manufacturer and distributor to agree upon the resale price is the most important element of the price-maintenance problem.

Secondly, Professor Taussig implies that the prices to be fixed will be uniform and permanent. The exercise of this right may or may not result in the prices agreed upon being uniform in all parts of the country. Uniformity of prices in all markets has been given undue prominence in price-maintenance discussions. This is not an essential feature. The question of quantity discounts, the questions whether freight is to be included or not, and kindred problems, constantly arise for consideration, even where uniformity is attempted. Moreover, as long as there is no monopoly or manufacturer's agreement on prices, price levels may change. As a matter of fact, they are changing constantly. In the automobile industry, for instance, where price maintenance has been employed by the agency method, the price levels have tended constantly downward. No advocate of price maintenance objects to this, but he does contend that the manufacturer and the distributor ought to have the right to agree upon the way in which prices should come down, instead of leaving this entirely to the final retailer.

Furthermore, the price-maintenance agitation is concerned entirely with identified goods made and sold under competitive conditions. These facts ought to be made a part of any definition.

These changes, if introduced in Professor Taussig's definition would modify it to read about as follows: *Price maintenance is the arrangement by which manufacturers of identified merchandise, made and sold under competitive conditions, agree with some or all of the distributors of this merchandise concerning the price at which it is to be resold.*

2. *Statement of the Case.*—Professor Taussig divides his statement of the case into two parts. The first is a presentation of the "psychological" elements and the second a presentation of the "marketing" elements of the problem. By adopting this approach to the subject he puts the discussion on an abstract basis. Effective reply to such abstract assertions as his statement of the case contains could be made only on the basis of a knowledge of facts not now available. For example, among the marketing factors he gives great importance to the aversion to change evidenced by those who are connected with the "established mechanism" for distributing merchandise. He contends that this aversion to change is due to inertia on the part of the regular trade. With equal justification it might be contended that this

aversion to change, if it exists, is due to a conviction on the part of the regular trade, as the result of experience, that the "regular" method most adequately performs the services necessary in distributing merchandise under modern conditions. But this answer may be no nearer the facts than is Professor Taussig's contention.

3. *The Sitting in Judgment.*—Professor Taussig employs the same form when he comes to "sit in judgment" on the merits of price maintenance. In this portion of the discussion we find the reasoning based on statements difficult of confirmation or refutation. For example, Professor Taussig declares that, "The existing system of conveying goods from the prime producer to the consumers is cumbersome and costly to an astonishing degree." Again, after discussing the effect of price maintenance on standards of quality, he reaches this conclusion: "Nevertheless, I question whether the system of price maintenance serves in any demonstrable degree to keep up the quality of goods." His general attitude toward the whole question is summed up in this sentence: "I suspect we shall have to content ourselves with the conclusion (or assumption?) that the ordinary purchaser is not endlessly gullible, that the predatory dealer is likely to overreach himself in the end, that honest business pays as a whole." And again, he says: "The opposition to price cutting is very largely, if not mainly, opposition to disturbers and innovators."

Such statements as these are very difficult to answer in kind, effectively. I shall not attempt it. It seems to me that more important than any need for answering them point by point is the necessity for getting back of them to some of the misconceptions of the actual situation in modern business which they indicate.

There are three of these misconceptions which seem to be most serious. The first of them is Professor Taussig's obvious misconception of the nature of *price cutting*.

I hold no brief for price maintenance in all its forms. I am anxious, however, that a discussion of it in such a body as this shall at least start with a fair presentation of both sides of the case. And this case has two well defined sides,—price maintenance and price cutting. Price cutting is the alternative offered if price maintenance is condemned. Price maintenance is mainly an effort to avoid price cutting.

Price maintenance unquestionably is capable of abuse. It is beyond dispute that price cutting also is capable of abuse. The real questions are: which of the two systems offers less risk of abuse, and which, under suitable restrictions, offers better protection of public interest. The choice is between control of prices by agreement between pro-

ducers and distributors, on the one hand, and complete control of prices by the retailer alone, on the other hand. This is the real issue.

Most of the trouble from price cutting comes from retailers with large capital. It is alleged that retailers of this type (regardless of whether their costs are less or not) by virtue of their ability to utilize the advertising value of the cut price as an accelerator of the speed of moving their other stock (even if they do not make up the loss by overcharge on other lines) are able to offer a line of identified goods regularly at a price which leaves no profit to their competitors, or even to them, on the sale of these goods. In other words, the spread becomes less than enough to make profitable the rendering of the distribution service.

These retailers, it is declared, merely use the good reputation of certain identified goods to further their own ends. They are not responsible for the preservation of the uniformity of quality of these goods. That must be preserved by the manufacturer if it is to be preserved at all. They do not care about the manufacturer's future sales. They have spent nothing on building up his reputation or that of his goods. Their large capital would enable them to give the goods away for a time if necessary, and the ultimate effect of any such action upon the general distribution of these goods is a matter of no concern to them. What these retailers are interested in is drawing to themselves, and away from their competitors, an increased share of the trade of the market they occupy.

Professor Taussig, in discussing the effect of a lowered price upon the demand schedule, takes the ground that to prevent "pushing sales" is anomalous, that a decline in price leads to an increase in sales, and that any endeavor to keep up resale prices would therefore tend to restrict the volume of business. He ignores the fact that what advocates of price maintenance object to is not that the price should be reduced, but that it should be reduced by the retailer in his own interests alone.

If price cutting were the result of the introduction of better distribution methods or operation at lower costs, no valid objection could be raised to it. But this is not the usual way in which a cut is made. Instead of retailers reducing the price in accordance with their saving in operating cost, and instead of their doing it for the purpose of increasing the sales of this merchandise, and instead of their never going below a spread covering costs, what actually happens is that a few retailers with large capital, in various localities, cut the price to a point leaving little or no spread, regardless of their own costs of

operation. The price cutter's increased sales of other articles, or increase in profits on other articles, are depended on to make up any deficit incurred in handling "cut" lines. In any case the ability of the cutter to continue to sell these goods regardless of the spread does, as Professor Taussig says, "make them unprofitable" for less well financed competitors to handle. No one would defend on economic grounds the right of any merchant to give away regularly an identified article in order to exploit his own business. This would be inequitable because of its effect on the future sales of the article, if for no other reason. Price maintenance is an effort to minimize a similar danger from cuts which may represent mere loss of profit rather than outright gift.

Professor Taussig seeks to establish some connection between price maintenance and an over-anxiety on the part of the "regular" trade to preserve the "regular" channels of trade. It is true that opposition to price maintenance originated with, and has largely been fostered by, small retailers and those who are interested in preserving small retailing. But it seems probable that this is due less to any natural conservation on the part of the "regular" trade, than it is to the fact that large capital is necessary for successful price cutting. This throws the larger retailers into the price cutting group, while the smaller retailers are left outside.

A second of Professor Taussig's conceptions of business conditions which needs clarifying is that involved in the question: *How do identified goods differ from any others in price-setting problems?*

Professor Taussig evidently takes the view that there is some virtue in the sale of goods under trade-mark under certain circumstances. But he says, "There are any number of articles which have been sold under a trade-mark year after year, generation after generation, without any dictation of retail price and also without any deterioration in quality." Again he says, "Yet in the long run profitableness of keeping up the brand suffices for the maintenance of quality." So far as I have been able to learn, most articles sold under brand were, until recently, sold under some form of price maintenance. Moreover, it is only by the employment of unusually costly methods (among which excessive advertising is conspicuous) for counteracting the inevitable effects of price cutting, that the "profitableness" of such articles can be preserved when there is no limit to the extent to which the spread may be narrowed by those who cannot suffer if the goods are driven from the market.

The connection between sale under trade-mark and price main-

tenance is more direct than would be inferred from reading Professor Taussig's discussion. As the price maintainer sees them, the chief links in this connection are: (1) Modern conditions of factory production make concealed deception of the consumer easy. (2) Sale under brand puts into the consumer's hands full power to repurchase goods he likes, or to avoid repurchase of goods he does not like. (3) In this process the preservation of *uniformity* of quality is more important than the question whether the quality be absolutely high or low. (4) General accessibility is also an important part of a successful brand-sale plan. (5) The preservation of uniformity in quality and general accessibility of articles sold by this method is possible only when the spread remains sufficient to cover the cost of rendering the services they involve. (6) Price maintenance by agreement between manufacturer and distributor makes the preservation of these services simple. Price setting by the retailer without restriction makes the preservation of these services difficult in some cases, and impossible in others.

Professor Taussig takes the position (which is beyond dispute) that the enforcement of quality standards by government regulation is not feasible except in a very few lines. But if the public is increasingly helpless to enforce quality standards by individual action or by law, is it not well to give serious consideration to the effectiveness, as a preserver of quality standards, of a system of competition (such as is offered by price maintenance) which puts emphasis on preservation of quality standards and makes sure the punishment for deception?

Another point concerning which it seems to me that Professor Taussig's conception of the facts needs to be brought closer to actual conditions is his apparent idea of *the nature of competition in identified goods*.

This term implies the existence of actual competition between brands. It implies also the absence of agreement between brand owners on price, and the absence of any appreciable degree of monopoly.

Moreover, it has to do with the method by which prices are determined, and the form which resulting competition takes. The retail price is the starting point for pricing, not merely articles to which price maintenance applies, but for most modern manufactures, and particularly for those sold under brands or trade-marks. An increasing number of goods are *made to retail* at a given price. This retail price seldom is chosen arbitrarily by the manufacturer. Ordinarily it is set by custom. For example, collars are *made to retail* at 25 cents, or at two for a quarter. Ready-made clothes are *made to retail* at \$15,

\$20, \$22.50, \$25, etc. Shoes are *made to retail* at certain standard prices with standard price intervals between them. And the same statement is true of drugs, groceries, and most of the lines of merchandise suitable for branding. The price on these goods has been set by custom. The goods are *made to retail* at this price and competitive conditions under these circumstances compel the manufacturer to put into the goods more quality than his competitors can at the same price, —if he is to get the business. These conditions at the same time force the reduction of the spread to a minimum compatible with the preservation of general distribution. In other words, in the sale of these goods the spread tends to represent the sum of certain standard competitive profits and costs for the necessary distributors.

Individual skill may result in individual variations from these standard prices and costs. It does not follow that the public, under price maintenance, need lose all the fruits of such variations from standard. Any distributor who sincerely wishes to share with the public any such saving can do it by added service, or by lower prices on unidentified goods, or on his own branded goods, quite as well as by cutting prices on identified goods which were *made to retail* at a known price. and whose production and distribution costs were based on this price.

This seems to me to be a more nearly accurate statement of the pricing methods for identified goods than that made by Professor Taussig when he says, "The retail price becomes the starting point; on this the retailer makes the reasonable profit; the wholesaler in turn makes his reasonable profit, over and above the manufacturer's price; the manufacturer finally gets what remains, his own gross receipt." The manufacturer of goods of this kind manifestly does not "get what remains." Conditions of competition force him to determine at the outset what shall "remain," by deciding how much "quality" he must put into the goods in order to get the business. And, finally, with competition between brands granted, the public has ample freedom to decline to buy if price or quality or condition of sale are not satisfactory.

The price maintenance problem in the light of the foregoing discussion may be summed up in a final query: *In the case of identified merchandise, made and sold under competitive conditions, does price maintenance or price cutting offer better protection of the public interest?*

This question obviously involves the further question whether the public "in the long run" shall have their ability to get such goods seriously impaired. The interests of the consumer in a case of this kind are obvious. If the identified goods are of such a nature that he

desires them after test, there is substantial gain to him in having them accessible and in not being obliged to test new goods continuously. This is quite aside from the question whether the intrinsic qualities of any such goods be high or low.

Nor is the unfair-trading element in competition by large scale retailers a negligible factor in the problem. There are now estimated to be nearly 2800 chains of stores in this country operating over 30,000 stores. Of these over 500 chains with 8000 stores are in the grocery business and 200 chains with 1400 stores in the drug business. About half of the grocery stores in Philadelphia are said to be controlled by four concerns. In several cities the chains do over 25 per cent of the grocery business and the percentage in Philadelphia is estimated to be between 60 per cent and 70 per cent. Department stores now number at least 8000 and it is estimated that about 1100 of these do over 40 per cent of the dry goods and women's "ready-to-wear" clothing business of the country.

These new types of distributor with large capital may in themselves represent an advance toward better, and perhaps more economical, distribution. But there are as yet no facts available to show that they are able actually to operate, in any except a few lines, at less cost than their smaller competitors. If they can do this, nothing can, or should stop their growth. But a feature of the price maintenance problem which cannot be neglected is this question whether such concerns are apt to use price cutting (in connection with their own large capital and the established reputation of identified goods) as a means for helping themselves create conditions of unfair trading in merchandise distribution. If they are apt to do this the policy of non-interference cannot be advocated as a safe one in the public interest.

4. *Conclusions.*—Professor Taussig's first two conclusions are: (1) "There is no public gain from giving an article an outward appurtenance of special merit." (2) "There is still less a public gain from compelling retail dealings to be made in the good old way and at the good old expense." Neither of these conclusions touches any of the really vital points involved in a choice between price maintenance and price cutting in the field under consideration. Both may be true, but neither concerns the main issue, which is whether the retailer alone is to decide the price of goods for whose reputation he is not responsible.

He next holds: (3) "The solution which has been reached by the courts is well enough." (4) "The common-law mode of dealing with it suffices." These two sentences do not picture accurately the present legal status of price maintenance. By the present interpretation of the

law such contracts are not merely unenforceable; they are illegal. That is one reason why new legislation is urged. Under present conditions price cutting is legal. Price maintenance by contract apparently is a penal offence.

His final conclusion is: (5) "Let the retailer retail as he sees fit and continue to trust in the efficacy of competition for cheapening the methods of distribution, and in the good sense of the purchasing public for assuring to them goods of the kind they really want." Is the retailer the only factor in the situation who is to operate without restraint? Can the retailer with large capital always be trusted to employ in competition only such methods as are in harmony with the public welfare? Is the good sense of the public effective against all the commercial devices that may be pitted against it?

This price maintenance question is one which, at this stage, cannot be discussed satisfactorily as a problem in economic theory. What seems necessary first is a plain, detached statement of the issues. This should be followed by an investigation into the facts, which will be a long and difficult process. After this the economic principles involved may be stated with some degree of conformity to the facts. Meanwhile, certain obvious abuses, both of restricted prices and unrestricted prices, may well be given recognition as important factors in the problem.

R. R. BOWKER: It has been my privilege, as once upon a time an economist, trained in the non-interference or classical school of economics under my friend and master, David A. Wells, to apply and test economic principles in a varied business experience. Some concrete examples from this experience may be useful in this discussion, and I trust as an early member of this Association that I have not lost standing in it because I do not wear a professor's gown and that most of my work as a writer on economics was done years ago. But first let me emphasize protest against the assumption which underlies Professor Taussig's conclusion in his fair and discriminating paper, that the Stevens Bill is a measure imposing new restrictions upon trade. On the contrary, it is a corrective of the restrictions of the Sherman Anti-Trust Law, clarifying the situation. For those of us who are directors of manufacturing corporations are in honest perplexity as to what we can do or what we cannot do, under penalty of going to jail.

In ten years' administration of the Edison Company of New York, I was able, not without difficulty, to apply the principle of equal rates to all consumers under like conditions. This enabled us to increase our customers, to widen our market, and from time to time to reduce rates while increasing dividends. The best business compliment I ever

had was that if this policy had been general on the part of public utility corporations, public service commissions would have been unnecessary and the public saved their cost and some incidental scandal. This was price maintenance directly between the manufacturer and consumer, but its effect illustrates the value of the principle. At the other extreme, as a consumer, I own two Ford automobiles—and I want none better. Henry Ford, basing business development on price maintenance, has done the world and my particular self the service of producing an article of best quality at the lowest possible price and at a decreasing price, because he controlled his market in the mutual interest of buyer and seller and made no special terms of cut-prices to any one.

Of later years I have been a director of an industrial corporation which manufactures a farm implement of high quality and of very wide use. It has based its successful business development on fixed prices and it now does a business of some millions a year. It spends from a hundred thousand to a quarter million dollars yearly in advertising and it has spent hundreds of thousands in experiment and betterment, with or beyond patent protection, to keep its product of the highest quality. It has saved probably a hundred million dollars and more to the dairy industry of the country. There is intense competition in the business and no kind of combination or conspiracy to keep up prices. The mail-order houses, of which I am also a customer and which do a considerable business service to the community, sell competing machines of fair quality for a half or a third of our prices. Our policy has always been to get a good price and good profit for the best thing and to have a fair and uniform price to all users. Price maintenance has enabled us to make and keep our product the best—so at least we believe. The distributing business is partly through agents and partly through implement dealers, and it is a serious dilemma whether, under the Sherman Law, as construed by the courts, we can or cannot protect prices to consumers through these dealers, but must have recourse to the agency system.

In quite another field, one of the periodicals of my company is the organ of the book trade, so that I have necessarily kept in touch with the price-maintenance question regarding books, which are peculiarly "identified" and "identical" articles widely advertised, and therefore useful as leaders to price cutters. Price maintenance under the net-price system has of recent years largely increased the sale of books, and incidentally the prosperity and to some extent the number of retail bookstores, an important cultural element in the community.

The previous cut-price system had proved most demoralizing, retailers and jobbers demanded larger and larger trade discounts to permit cutting, and advertised retail prices had to be correspondingly increased; while the introduction of net prices in some cases reduced the retail prices of books and generally operated to prevent the increase of advertised prices, despite the general increase in material so considerable in recent years. There are two department stores in New York both of which have notable book departments, excellently equipped and managed bookstores, one of which makes a point of cut-prices, while the other is loyal to price maintenance. One of these is the successor of A. T. Stewart, pioneer in the department store business, who did the community the great service of replacing with fixed retail price the old system of bargaining and haggling which wasted the time of lady shoppers and salespeople when I was a boy and did my mother's errands. Both stores are good advertisers and do good merchandising. The cut-price establishment has successfully fought the Publishers' Association under the Sherman Law and has made much advertising capital out of the fight. I have reason to know that it has sold books at less than the price at which they were actually bought, and it stands to reason that when the "spread" on one line of goods is low or negative, as in this case, the "spread" on the other lines must be made proportionately greater—to the disadvantage of the consumer who is led to think that he can buy other goods as cheaply as books. Otherwise department stores must fail as many have failed in New York.

The overhead charges of a retail bookstore are high, exceeding twenty-five per cent, and requiring a "spread" of a third of the retail price to give any margin of profit; but the overhead costs of a department store are as high and probably higher, as the figures published in *System* have indicated. The experience of the book trade, as to price maintenance and price-cutting, is to my mind one of the best illustrations of the desirability of the Stevens Bill. I may add that on our own periodicals a definite system of fixed prices for advertising, giving like rates for like quantities of advertising, has been the absolute rule for years, to the mutual advantage and satisfaction on the whole of proprietors, advertising representatives, and advertisers.

Let me again emphasize what Mr. Stevens has, I think, made clear, that the bill which bears his name—I refer to it in principle rather than in detail, for it is not without ambiguities and may need clarifying and correction—is not a restrictive, paternal measure, but simply a correction of the unfortunate extremes to which the Sherman Anti-Trust Law has carried restriction.

THE RELATION OF PUBLIC FINANCE TO PRIVATE CREDIT¹

By WILLARD STRAIGHT
New York

The economist or the student of finance, in discussing the theory of credits, must necessarily analyze the interaction of gold reserves, of inflation and depreciation, and the effect of favorable or adverse balances of trade. Deferring to your superior knowledge of these most interesting and important matters, I shall not attempt to deal therewith. I shall, if I may, ask you to approach the general subject from a somewhat different angle, and to regard private credit as the national basis upon which any constructive international commercial and financial development must depend.

In the past, we in the United States unfortunately have been accustomed too generally to consider credit problems not on their intrinsic merits but from partisan points of view. Thanks to our enormous resources, we have been able to borrow freely, and on easy terms, from Europe. Our own capital, therefore, inevitably has been attracted by quick returns, and we have been influenced by reasons of immediate expediency rather than guided by a clear conception of the ultimate goal. In consequence, we were long blind to the necessity of evolving a well-balanced, consistent, and progressive national financial policy, designed to correlate and galvanize into effective coöperation the agricultural, industrial, and commercial activities from whose cumulative power such a policy should derive its momentum. Our failure to appreciate the importance of creating adequate credit machinery cost us dearly. We persistently disregarded the bitter experience of recurring panics, and were long deaf to the recommendations of men who, like the late Senator Aldrich and Mr. Paul Warburg, urged the organization of a banking system which would enable us to mobilize our reserves and to utilize to the fullest extent our credit resources.

In the twenty years preceding our Civil War, the United States had traded in every sea. Foreign commerce in those days was largely a question of barter. The intricate problems of international finance, which are now so absorbing, were unheard of, and the development of markets by judicious investment was

¹ Read at the joint meeting of the American Economic Association and the Second Pan American Scientific Congress, December 30, 1915.

virtually unknown. Great Britain, Germany, and France later discovered that bankers held the golden key to overseas trade. We, however, were busily engaged in borrowing abroad and ourselves had no surplus funds for foreign investment. We exported raw materials and imported manufactured goods. Following the Spanish War, however, American industry, through the great combinations, became organized in units sufficiently powerful to enable it to enter the export trade. Our manufacturers soon realized that unless American bankers would finance their foreign customers, they could not compete with British and German industry. An American banking group was organized for China, and loans to South and Central American republics were considered. A certain stage of what might be termed economic saturation having been reached within our own boundaries, we began to look abroad. Just as the development of our eastern seaboard enabled the merchants of the early fifties to hold their own in the trading competition of the period, so the general standard throughout our country just prior to the European War had brought our bankers and manufacturers to the point where increasing production and accumulating capital at home, and the ability to borrow on low terms in London and Paris, made them anxious to enter the financial-commercial struggle for trade with the as yet undeveloped corners of the earth. The Federal Reserve Act, by releasing reserves, added tremendously to our credit resources and promised to give a fresh impetus to our desire for trade expansion. Before the efficacy of this new machinery could be tested, however, it was subjected to the sudden strain of war.

The American republics were differently affected by this world-wide crisis. We, who have been able to sell largely to Europe, have been enriched. The countries which have depended upon European capital for their development have been obliged to postpone many important works. But all of us shall be wise indeed if, by closely observing the manner in which the nations now at war deal with the problems to which this crisis has given rise, we are able to profit by their example and to avoid the consequences of their mistakes.

At the outset, Germany alone was prepared. Not only her armies, but her financial and industrial resources, were at once mobilized. In France and in Great Britain, the magnitude of the task and the necessity for correlating every form of national activity in the supreme struggle for victory was not at once realized.

But coincident with military and naval endeavor, the importance of conserving national credit was recognized from the outset. The German problem of war finance has been simplified by Germany's inability to import goods from abroad. The question of at present providing gold exchange has consequently been one of subordinate importance. Great Britain and France, on the other hand, have been obliged to purchase vast quantities of material, and their financial measures will repay the most careful study. Early steps were taken by these two governments to assure the continuance of business as nearly as possible along normal lines. In England, bill brokers and foreign exchange houses, as well as manufacturers and merchants engaged in overseas trade, were given special guarantees by the government. Proceeds of the war loans were utilized in a manner calculated to assure uninterrupted and profitable business, in order that the proceeds thereof might be subject to yet further calls. When the London Stock Exchange was opened early in the present year, it was announced that no new foreign issues might be made without the permission of the Chancellor of the Exchequer. The financial resources of Great Britain were to be conserved for the prosecution of the war. Pressure was brought to bear upon British investors to induce them to sell their holdings of American securities in order that they might invest in the British war loans. Only recently the government has taken steps to mobilize American obligations held in Great Britain, to be utilized under government direction to maintain exchange between London and New York. In France, through the coöperation of some of the large private banking houses, French investors were induced to deposit their holdings of American issues to provide the basis for a credit which was negotiated in this country. In both England and France, every effort was made to issue war loans in a form which would attract the small investor. In other words, European financial policies have been calculated to insure the national organization of credit to provide means for continuing the war not only by financing military operations, but by granting extraordinary facilities to conserve financial, industrial, and commercial resources to the fullest extent possible. Such synchronization of effort—coöperation on such a scale—is without precedent. For us in the United States at least, it would, in the absence of special legislation, be impossible. Yet we too have widened our financial outlook and engaged in operations which two years ago we should have considered fantastic. In the autumn of 1914, our

most pressing problem, the stabilization of exchange by the settlement of our immediate debt to Europe, required the united energy of the newly organized Federal Reserve Board and the bankers who loyally stepped into the breach. Within six months after the commencement of hostilities, however, we were busily engaged in this country in devising ways and means by which we might assist Europe to pay for our goods which were being purchased in increasing volume. We bought back from Europe great quantities of our securities. A series of minor credit operations culminated in the flotation of the great Allied loan. The success of the war loans in Great Britain, France, and Germany depended upon the credit of the countless private individuals who subscribed their savings to support mobilized and correlated military, financial, industrial, and commercial activities. In making a public offering of the Anglo-French loan in this country, the American bankers were performing a function analogous to that of the governments in Europe. By mobilizing our private capital, they were endeavoring to create a public credit to finance the great export trade from which our present prosperity has been derived. This transaction was almost as important to this country as a whole as it was to the powers now at war. Every individual who has invested in the European credits which have been negotiated here has stimulated American industry by facilitating the export of American goods and, by acquiring a private investment, has performed a public service.

Prior to the outbreak of the war in Europe, there had been intimate commercial relations between the American nations. The trade between this country and our sister republics farther to the south, however, had not been developed. There was a long established British and French investment in the Argentine, in Brazil, in Uruguay, in Chile, and Peru, and the dealing between South and North America were largely conducted through London and Paris. The relationship was triangular—imports into the United States from South America were heavily in excess of our exports—and our debit balance was settled in pounds sterling. The declaration of moratoria, the dislocation of credit machinery, the interruption of shipping, affected the entire American continent. Canada only was at war. The neutral nations, finding the old channels of trade suddenly blocked, looked to each other. We set to work to examine our mutual needs, and endeavored to find means by which we might be of mutual assistance. Steps were taken to

handle exchange direct between New York and the other American financial centers. Branches of the National City Bank were opened to provide facilities which had not theretofore existed. Informal discussions between diplomats and representatives of American business developed into the Pan-American Financial Conference held last spring under the auspices of our Secretary of the Treasury. Pan-Americanism, which too long had been a pleasant after-dinner phrase, gradually assumed practical significance, as it was realized more generally throughout both continents that an increasing intimacy would be mutually beneficial.

It is difficult to generalize. Each nation has problems peculiarly its own, which must be given separate consideration and regarded in the light of particular needs. It is, nevertheless, possible to state that, in almost every case, the republics to the south require capital for their development, while the United States is seeking more extensive markets for its manufactured goods.

By reason of our present great and increasing prosperity, and the restrictions which the necessity for reconstruction will impose upon the European bankers who have hitherto financed development enterprises throughout the world, it would seem inevitable that those who are seeking capital must, for a time at least, largely depend upon the accommodation which they may be able to secure in this country. Fortunately, with the increase of our investing power, there has come a rapidly growing appreciation of the fact that this power, constituting as it does a national asset, should be utilized for national ends. The resources which we shall have at our command will undoubtedly in some measure be available for the rehabilitation of European industry after the war. It will be to our selfish interest to assist in so far as we consistently can in the restoration of normal financial and commercial conditions throughout the world. In order that American industry, upon which our prosperity so largely depends, may benefit by the use of our lending power, however, it must be a primary feature of our policy, as far as possible, to utilize our available capital in cooperation with the borrowers to create and assure a market for American goods. But the readiness of American bankers to undertake to offer foreign securities will necessarily depend upon the credit of the prospective borrower, and upon the return to be derived from the purchase of the securities offered. The credit of certain of our sister republics in South and Central America is unquestioned, but the development of others, equally rich in re-

sources, has in the past been hampered by political disturbance. They have afforded fields for speculation, rather than for investment, and foreign capital has too frequently allied itself with one political party or another for illicit mutual gain, rather than to secure a legitimate profit for public work well done. It has often been urged that our own government should in some way guarantee or assure the safety of foreign investments undertaken by its nationals. Our State Department may use its good offices to secure the enforcement of a just contract entered into in good faith, but it cannot, and should not, act as a collecting agency. It is in the interest of those who desire to borrow, nations as well as individuals, to maintain their credit in order that they may secure necessary financial assistance on reasonable terms. To assure public is to safeguard private credit. Where private credit is unquestioned, national borrowing power is secure.

The European War has given to the American republics a new bond of mutual dependence. Politically we are closer than ever before. In our mutual necessity, there is a need, and at the same time an opportunity, for much more intimate commercial and financial coöperation. You require capital, while we in turn must try to stimulate the exchange of products between this country and our sister republics to the south. In order that we may sell our goods to you, we must enable you to produce more which we in turn can purchase. We are beginning to realize that we must furnish capital to our customers if we would market our goods. We must maintain a relationship which, in being mutually profitable, will bring a better mutual understanding of our aspirations and ideals. Such a relationship can be established if those who would secure financial assistance offer conditions which will attract our investment, and if we in turn are willing to grant the credits which will enable you to purchase in this country the articles which you require. Both lender and borrower must mobilize private credit—the borrower in order that he may borrow advantageously for the development of his resources, the lender in order that he may lend intelligently for the extension of his national trade. Private credit is the ultimate basis of international finance, and we are just entering upon an era where public finance will play an increasingly important part as the most powerful instrument of constructive domestic, as well as foreign, national policy.

MINUTES OF BUSINESS MEETINGS AT WASHINGTON

DECEMBER 28 TO 30, 1915

In accordance with the announcement in the program of the annual meeting, the Executive Committee met in Room 116, Hotel Raleigh, at 2 P.M., Tuesday, December 28. There were present President Willcox and Messrs. Carver, Ely, Farnam, Hammond, Hollander, Kinley, Marshall, Mitchell, Taussig, and Young.

The minutes of the previous meeting having been mailed to the members of the committee, and incorporated, in abridged form, in the annual report of the Secretary, their reading was dispensed with.

The Secretary suggested that an index covering the first three series of the *Publications* of the Association together with the *Economic Studies* would be useful. It was voted to empower the Secretary to prepare and publish such an index.

Invitations for the annual meeting for 1916 having been received from Cleveland, Columbus, and Cincinnati, Ohio, and from Lexington, Kentucky, as well as from commercial organizations in certain other cities, it was voted that the choice be narrowed to Columbus and Lexington. Some members of the committee felt that since Lexington had once been awarded the meeting for 1915, and since our would-be hosts had courteously permitted us to change to Washington in order to cooperate with the Pan American Scientific Congress, the Association might be deemed to be committed in a measure to Lexington as its next place of meeting. But the claims of Columbus were cogently set forth by Professor Hammond, and its greater accessibility was a factor influencing some of the committee. A test vote was taken, resulting in a tie, so the matter was referred to the ensuing business meeting of the Association for an expression of opinion.

A business meeting of the Association was held in the Oak Room, Hotel Raleigh, on Wednesday, December 29, at 9.30 A.M., with President Willcox presiding.

The reports of the Secretary, the Treasurer, and the Auditing Committee were read and each was, by vote, approved.

Professor Willcox presented a preliminary report for the Committee on Federal Statistics,¹ giving an account of its organization and its proposed procedure.

The Secretary explained that the Committee on Academic Freedom

¹ *Proceedings Twenty-seventh Annual Meeting*, p. 302.

and Academic Tenure,² which had been merged in a general committee of the American Association of University Professors, would not make a further separate report, but that the report of the general committee would be presented at a meeting of the Association of University Professors on the ensuing Friday evening, to which members of the American Economic Association were invited.

The President announced the appointment of the following committees: On nominations: Messrs. David Kinley, G. E. Barnett, F. A. Fetter, E. R. A. Seligman; On resolutions: Messrs. H. B. Gardner, H. A. Millis, and W. C. Mitchell.

Mr. R. R. Bowker then presented the following resolution, which by vote was referred to the Executive Committee.

RESOLVED, That the President be authorized to appoint a special committee on coordination, efficiency, and economy in taxation, to consist of five members, with power to add to their number and to include representatives of federal, state, or municipal governments or taxing authorities, which committee may act coöperatively or jointly with any like committee from the National Tax Association or other bodies.

The Secretary submitted the following resolution, which was adopted by vote:

RESOLVED, That the President be empowered to appoint a committee of three members, to consider the advisability of the publication by the Association of an annual or occasional prize monograph, and to report upon plans and rules for the competition, if such be deemed advisable.

On motion of Professor David Kinley it was voted that a committee of five be appointed to see that the proper courtesies were extended on behalf of the Association to the economists from South America in attendance upon the Second Pan American Scientific Congress. The President appointed the following committee: Messrs. David Kinley, F. W. Taussig, E. R. A. Seligman, R. T. Ely, J. H. Hollander.

The Executive Committee having requested the members of the Association to express their choice as between Columbus and Lexington as the place of holding the twenty-ninth annual meeting, an informal vote was taken, in which the majority of those present indicated a preference for Columbus.

A business meeting of the Association was held on Thursday, December 30, at 9.30 A.M., in the Banquet Hall of the Hotel Raleigh, with President Willcox in the chair.

The Committee on Resolutions presented the following report, to-

² See below, p. 230.

gether with the recommendation that it be entered on the records of the Association, and that copies be sent to the proper representatives of the bodies referred to. By unanimous vote the report was adopted and the recommendation approved.

The American Economic Association wishes to express to the local members of the Association, the joint committee of the allied associations meeting in Washington at this time, and to Mr. H. J. Harris, chairman, and the other members of the local committee of the Association, its sincere appreciation of their generosity and labor which have contributed so much to the success of its twenty-eighth annual meeting.

It desires also to thank the officers and executive committee of the Second Pan American Scientific Congress for affording the members of this Association the opportunity of meeting and coöperating with the economists from South and Central American countries attending that Congress, and to express its grateful acknowledgment of the hospitality of the Regents and Secretary of the Smithsonian Institution.

HENRY B. GARDNER

H. A. MILLIS

WESLEY C. MITCHELL

Committee on Resolutions.

Professor David Kinley presented the report of the Committee on Nominations, as follows: for President, T. N. Carver; for Vice-President, P. M. Warburg, T. S. Adams, and M. B. Hammond; for Secretary-Treasurer, A. A. Young; for members of the Executive Committee, W. H. Glasson and F. R. Fairchild; for members of the Editorial Board, J. L. Coulter and T. W. Page.

It was unanimously voted to accept this report and to authorize the Secretary to cast the vote of the members present for the list of officers named. The vote was so cast and the officers named were elected.

Mr. E. A. Goldenweiser presented the following resolution:

RESOLVED, That the President appoint a committee of three members to consider the question whether the present method of arranging the programs of the annual meetings is susceptible of improvement; such committee to report its findings to the Association at the next annual meeting.

Upon motion of Professor David Kinley the resolution was amended so as to read:

RESOLVED, That the Association elect a committee of three members [etc.].

As thus amended the resolution was adopted, and Messrs. L. C. Marshall, E. A. Goldenweiser, and B. M. Anderson, Jr., were elected members of the committee.

The Executive Committee met in the Banquet Hall of the Hotel Raleigh at 12.30 P.M., Thursday, December 30. There were present

Messrs. Carver, Dewey, Ely, Fetter, Hammond, Marshall, Willcox, and Young.

In accordance with the preference expressed by the members of the Association it was voted that the twenty-ninth annual meeting be held in Columbus, Ohio.

At the request of the Secretary the President was authorized to appoint a committee of three members to make recommendations for the investment of some of the Association's funds.

The President and Secretary were authorized to appoint a sub-committee of three members upon secondary education in economics.

REPORT OF THE SECRETARY FOR THE YEAR ENDING
DECEMBER 17, 1915

Two meetings of the Executive Committee were held during the year, in each case at the City Club, New York. At the first meeting, on March 18, the program and other arrangements for the San Francisco meeting were informally discussed. Invitations for the December meeting having been received from Lexington, Indianapolis, and Cincinnati, it was voted that Lexington be deemed the first choice of the committee, subject to the findings of certain inquiries about local facilities, and that Indianapolis be deemed the second choice. The power of making a final decision was given to the President and Secretary.

The following were appointed members of the Committee upon Federal Work in Statistics, created at the previous annual meeting:¹ G. E. Barnett, J. L. Coulter, J. A. Field, W. C. Mitchell, and W. F. Willcox, chairman. W. M. Persons was later added to the committee. Two resolutions which had been introduced at the annual meeting, relating to the preparation of the national budget and to a proposed investigation of occupational mortality² and disability were referred to this new committee.

Acting upon the preference expressed by the Executive Committee, and after making sure that the local facilities were in all ways adequate, the President and Secretary chose Lexington, Ky., as the place of holding the twenty-eighth annual meeting. Later, however, the officials of the Second Pan American Scientific Congress asked the cooperation of the American Economic Association, and it appeared that the meetings of Section IX of the Congress would attract a number of our members. These new considerations were set before the Executive Committee by correspondence and a ballot was taken by mail which authorized the transfer of the meeting to Washington.

The second meeting of the Executive Committee, held on July 13, was devoted to the discussion of plans for the Washington meeting, including the matter of cooperation with the Second Pan American Scientific Congress and with the American Historical Association.

Professor E. R. A. Seligman, chairman of our special committee on Academic Freedom and Academic Tenure, reported on April 16 that it was proposed to merge the joint committee of nine, representing

¹ *Proceedings Twenty-seventh Annual Meeting*, p. 302.

² *Proceedings Twenty-seventh Annual Meeting*, pp. 302, 303.

the American Economic Association, the American Political Science Association, and the American Sociological Society, with a new committee of fifteen, acting as a committee of the American Association of University Professors. It appeared to the officers of the Association that the authorization given to our committee "to coöperate with any similar committees which may be constituted by other societies in the field of the social sciences"³ was broad enough to cover the proposed merger. This opinion was submitted to the members of the Executive Committee, and, no dissent being expressed, Professor Seligman was informed that the step proposed was within the powers of his committee.

The special meeting of the Association held at San Francisco, Berkeley, and Palo Alto in August was attended by some sixty members. The program, arranged by the local committee on arrangements in coöperation with the President of the Association, was appropriate to the time and place. The meeting afforded a pleasant occasion for the gathering of the economists of the Pacific coast, who constituted about half of the members present, and who are too widely separated by distance to have many opportunities of the kind, and it also made it possible for some of their colleagues in the Middle West and East to come into touch with them.

The changes in our list of members and subscribers are as follows:

Members resigned	159
Members removed for lack of address.....	5
Members dropped for non-payment of dues.....	82
Members removed by death	26
Subscriptions discontinued	9
Total subtractions	281
New members added	214
New subscribers added	42
Total additions	256
Net loss	25

Our members and subscribers now number 2444. Of these 2004 are members paying annually; 80 are life members; 7 are honorary members; and 353 are subscribers.

The net loss of 25 members and subscribers is smaller than in any other year since the increase in the annual dues from three dollars to five. This may be taken to indicate that we are approaching a state of "normal equilibrium"; that with the continued help of those members who are actively interested in the work of the Association it may

³ *Proceedings Twenty-sixth Annual Meeting*, p. 197.

be possible to maintain our membership at its present figure. To many of our members the Secretary is indebted for coöperation of that efficient and fruitful sort which costs its givers both time and thought. And it is certain that coöperation of this kind will continue to be needed, if only to hold our membership where it is. Our present income from membership dues and subscriptions is adequate to support the work we are now doing, but does not afford a margin for any substantial increase in our expenditures. The Managing Editor of the *American Economic Review* finds himself hampered in various ways by reason of the strict economy which has to be observed in the conduct of that publication. More liberal payment for contributions and for assistance as well as for a better grade of printing would enable him to effect substantial improvements in our already excellent journal. It is to be hoped, too, that the Association will be able before long to resume the publication of monographs. Outside of a few large universities facilities for the publication of scholarly monographs in the field of economics are very meager. If the Association should be able to publish one or two monographs a year as supplements to the *Review*, it would not only perform a real service, but would increase the value of membership in the Association. Possibly it might be well in the near future to undertake the publication of one annual monograph. As the selection of a single monograph for publication would in itself be deemed an honor, the matter might be arranged in the form of a prize competition and possibly, after the fashion of the successful competitions conducted by the Royal Statistical Society (and many other learned societies), a medal might be awarded the successful competitor.

It is possible, also, that the Association needs new activities for the sake of its own health. With our finances in good condition, our journal admirably conducted for us, and our meetings bringing annually their full measure of stimulating discussion and pleasant associations, we may be in danger of falling into a pleasant path of routine, calcuated in the end to weaken our influence. Might we not make a larger use of investigations and reports by special committees than we have in the past? Each year a number of new issues, involving fundamental economic questions, come to the foreground. The economists of the country are continually being appealed to in these matters, but they speak only through individual voices, here and there. Without departing from our declared determination to "take no partisan attitude" nor to commit our members "to any position on practical economic questions," there is much that we could do in securing some consensus of opinion on a number of technical economic problems. We needn't agree

in matters of general economic policies; we might agree on certain matters of technique. No part of the work of the young and vigorous National Tax Association has been more valuable than the reports from its special committees upon a number of tax problems. Are not such pressing matters as the economic aspects of unfair competition, railway valuation (a distinctly economic problem which the accountants and engineers have well-nigh taken from us), the measurement of wealth and income in the United States, the economic aspects of conservation,—and a host of others,—topics upon which we as economists might have something to say that would be worth saying, and which we could say with larger influence through committees of this Association than in any other way? Work on such committees takes time, and it would be unfair to ask our members to serve in this way unless we could supply funds for necessary clerical expenses and assistance.

These things seem to point toward the desirability of some increase in our membership, if that can be secured without any sacrifice of our position as an organization of persons interested in the scientific study of economic problems.

The list of deaths among our membership reported to the Secretary during the year includes the names of a number who had been long on our rolls and whom we had learned to honor for their faithful and efficient service in the field of economic scholarship.

JOHANNES CONRAD	CHARLES L. LOOP
(Honorary Member)	WILLIAM LUMMIS
CHARLES FRANCIS ADAMS	E. S. MARLOW
NELSON W. ALDRICH	LEE MCCLUNG
JOHN HAMILTON BLAIR	CHARLES W. MICHAEL
GUY STEVENS CALLENDER	EDWARD BUNNELL PHELPS
KATHARINE COMAN	SERENO S. PRATT
CHARLES ARTHUR CONANT	EDWARD VANDYKE ROBINSON
GRACE H. DODGE	JULIUS ROTTENBERG
E. L. R. GOULD	WILLIAM SMART
W. M. GROTON	SAMUEL G. SMITH
CHARLES R. HENDERSON	ELMER B. WALLER
DAVID HUTZLER	PETER WHITE
F. BROMLEY JANSEN	

Respectfully submitted,

ALLYN A. YOUNG,

Secretary.

REPORT OF THE TREASURER FOR THE YEAR ENDING DECEMBER 17, 1915

RECEIPTS AND EXPENDITURES 1915

Cash on hand December 18, 1914..... \$3,285.42

Receipts

Membership Dues	\$9190.50
Subscriptions	1749.29
Sales of Publications	526.60
Interest	297.65
	<hr/>
	\$11,764.04

\$15,049.46

Expenditures

Publications	
Review Printing	\$2837.41
Review Editorial	2835.00
Review Expenses and Supplies	1566.42
	<hr/>
	\$7238.83
Proceedings and Handbook	1204.23
Sundry Pub'n Expense	88.36
	<hr/>
	\$8531.42

Secretary's Office

Furniture and Fixtures	\$ 24.12
Office Salaries	1730.87
Traveling Expense	312.64
Stationery and Printing	173.98
Office Supplies	42.10
Office Postage	447.61
Telegraph and Telephone	61.03
Express and Cartage	3.72
Miscellaneous Expense	15.75
Annual Meeting	171.83

Insurance	\$2983.65
Storage of Publications	66.50
	<hr/>
	50.00

Cash on hand December 17, 1915..... \$11,631.57

Ithaca Trust Company	\$128.60
Check not deposited	5.00
Central Trust Company	3284.29
	<hr/>
	\$3,417.89

\$15,049.46

INCOME STATEMENT

<i>Expenditures</i>		<i>Receipts</i>	
Review Printing....	\$2834.91	Membership Dues..	\$10114.70
Review Editorial...	2710.00	Less Defaulted..	103.75
Review Expenses			<u>\$10010.95</u>
and Supplies	1458.73	Subscriptions	\$1804.54
	<u>\$7003.64</u>	Less Defaulted..	17.50
Proceedings	858.70		<u>\$1787.04</u>
Sundry Publication Expense	86.03	Sales of Publications.....	486.05
	<u>\$7948.37</u>	Interest	297.65
Office Salaries.....	\$1630.87		
Traveling Expenses			
of Secretary.....	312.64		
Stationery, inc. Off.			
Printing	173.98		
Office Supplies	42.10		
Office Postage	447.36		
Telegraph and Tele-			
phone	61.03		
Express and Cartage			
Miscellaneous Ex-			
pense	15.75		
Annual Meeting....	131.98		
	<u>\$2819.43</u>		
Storage of Publications...	50.00		
Insurance	66.50		
Depreciation of Furniture			
and Fixtures	37.37		
	<u>\$10921.67</u>		
Surplus	1660.02		
	<u>\$12,581.69</u>		<u>\$12,581.69</u>

The gross surplus for the year, \$1660.02, indicates the thoroughly sound condition of the Association's finances. This is about a thousand dollars larger than the surplus from the operations of the preceding year. It is likely that this amount will be somewhat reduced by reason of defaulted membership dues. A reserve of \$500 is set aside for that purpose in the subjoined statements of the Auditing Committee, thus reducing the net surplus to \$1160.02. The total income was only slightly larger than in the preceding year. But the Managing Editor was able to effect a saving of about \$500 in the cost of publishing the *American Economic Review*, and the omission of the *Handbook* from the publications for the year was responsible for a further saving.

Respectfully submitted,

ALLYN A. YOUNG,

Treasurer.

REPORT OF THE AUDITING COMMITTEE

Ithaca, N. Y., December 22, 1915.

To the American Economic Association:

An audit in detail of the accounts of the Secretary-Treasurer of the Association, for the fiscal year ended December 17, 1915, has been made by assistants under the direction of your committee. The accompanying statement of income and outgo, balance sheet, and exhibit of charges and credits to surplus, are in our opinion correct, and we certify that the ledger accounts are in full agreement with the balance sheet here presented.

Very respectfully,

DONALD ENGLISH,
J. R. TURNER,
ABBOTT PAYSON USHER,
Auditing Committee.

BALANCE SHEET

<i>Assets</i>		<i>Liabilities</i>	
Cash in Bank	\$133.60	Accounts Payable	\$41.67
Cash in Savings Account	3284.29	Membership Dues Prepaid ..	331.00
Investments		Reserves:	
New York City Assessment		Defaulted Membership	
Bond	\$1000	Dues Receivable ...	\$475
United Fruit Company		For Bad Accounts	
4½'s of 1923.....	2000	Receivable	25
	3000.00		500.00
Prepaid Insurance	32.00	Surplus	7978.08
Membership Dues Receivable.	2009.70		
Accounts Receivable	91.16		
Furniture and Fixtures			
Sec.-Treas. Office	300.00		
	<u>\$8850.75</u>		<u>\$8850.75</u>

SURPLUS ACCOUNT

Balance December 17, 1915.....	\$6997.96
Defaulted Membership Dues	\$622.20
Less Reserve	450.00
	<u>\$172.00</u>
Uncollectible Accounts Receivable	\$69.40
Less Reserve	50.00
	<u>19.40</u>
	<u>\$191.40</u>
Less Amount Paid on Membership	
Dues written off	11.50
	<u>\$179.90</u>
Actual Surplus prior to 1915.....	\$6818.06
Net Surplus for 1915.....	1160.03
	<u>\$7978.08</u>
Surplus December 17, 1915.....	<u>\$7978.08</u>

Business Meetings

227

INCOME AND OUTGO

Ordinary Income

Dues	\$10,114.70
Less Defaulted ¹	103.75

Net	10,010.95
Interest	297.65

\$10,308.60

Ordinary Outgo

Office Salaries	\$1,630.87
Traveling Expenses	312.64
Stationery and Printing	173.98
Postage	447.36
Supplies	42.10
Telephone and Telegraph	61.03
Freight and Cartage	3.72
Insurance	2.00
Annual Meeting	131.98
Depreciation of Furniture & Fixtures	37.37
Miscellaneous Expense	15.75

2,858.80

Excess of Ordinary Income	<u>\$7,449.80</u>
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Publication Outgo

Printing	\$2,834.91
Editorial	1,500.00
Contributonal	1,210.00
Editorial Expenses	1,458.73
Proceedings and Handbook	858.70
Sundry Publication Expenses	86.03

\$7,948.37

Storage of Publications	50.00
Insurance	64.50

114.50

\$8,062.87

Publication Income

Subscriptions	\$1,804.54
Sales	\$486.05
Less uncollectible	17.50

168.55

2,273.09

Excess of Publication Outgo	<u>\$5,789.78</u>
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Gross Surplus	<u>\$1,660.02</u>
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Reserve for Defaulted Membership Dues

Receivable	\$475.00
Reserve for Bad Accounts Receivable	25.00

500.00

Net Surplus for the year	<u><u>\$1,160.02</u></u>
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¹ Amount due from members who have been dropped during past year, for publications furnished during the year.

REPORT OF THE MANAGING EDITOR OF THE AMERICAN ECONOMIC REVIEW FOR THE YEAR ENDING DECEMBER, 1915

The cost of the *Review* during the past year has been \$7,003.64 as compared with \$7,531.34 for the year 1914. By principal items the cost has been as follows:

Printing	\$2834.91
Salary of editor	1500.00
Payments to contributors	1210.00
Clerical assistance	1171.87
Supplies	286.86
	<hr/>
	\$7003.64

The total number of pages printed was 1003 as compared with 1030 in the preceding year. There have been 16 leading articles, a few less than usual; and the amount of space given to listing of new books has been considerably less, due to the falling off of publication in Europe. On the other hand, the number of pages given to documents, reports, and legislation has increased.

In all, 164 persons have coöperated in writing for the *Review*, contributing leading articles, reviews, document notes, and periodical abstracts.

A few changes have taken place in the staff of abstract coöperators, as follows: Dr. Julius H. Parmelee has prepared abstracts on the subject of railways, formerly in charge of Professor E. R. Dewsnup; Mr. Martin J. Shugrue has succeeded Dr. John Bauer in the abstracting of articles on accounting; Professor Ralph E. Heilman has prepared abstracts in the field of public utilities; Professor Charles P. Huse has taken over the section of public finance resigned by Dr. Williamson; Professor A. S. Dewing has abstracted articles on investments and on corporations and trusts; Professor Henry R. Mussey has resigned as abstractor of articles on tariffs and reciprocity.

The following have served on the board of editors: Professor Clive Day and Professor H. J. Davenport, whose terms expire with 1917; Professor F. A. Fetter and Professor H. E. Mills, whose terms expire with 1916; and Dr. H. B. Gardner and Dr. J. L. Coulter, whose terms expire with 1915.

Appended are comparative tables showing the distribution of contents and costs by principal group items, in continuation of tables given in the report for last year.

1. PAGES GIVEN TO EACH SECTION

	1911	1912	1913	1914	1915
Leading articles	342	291	374	327	314
Review of books	304	298	268	243	237
New books listed	62	101	104	136	90
Documents, reports, legislation	89	110	141	113	142
Periodical abstracts	133	186	167	166	144
Notes	40	41	43	35	42
Doctoral dissertations	8	11	8	10	14
	978	1038	1078	1030	1003

2. NUMBER OF ITEMS IN EACH SECTION

	1911	1912	1913	1914	1915
Leading articles	21	17	20	20	16
Books reviewed	207	213	198	145	135
New books listed	785	1452	1416	1575	1062
Signed notes in documents, reports and legislation	27	32	42	33	29
Periodical abstracts	1074	1727	1877	2021	1758

3. PERCENTAGE GIVEN TO EACH SECTION

	1911	1912	1913	1914	1915
Leading articles	34.9	28.0	32.2	31.8	31.3
Reviews of books	31.0	28.7	24.9	23.6	25.7
New books listed	6.2	9.6	9.6	13.2	9.0
Documents, reports, legislation	9.1	10.6	13.0	11.0	14.2
Periodical abstracts	13.4	17.9	15.5	16.1	14.4
Notes	4.0	4.0	4.0	3.4	4.2
Doctoral dissertations .....	.8	1.0	.7	.9	1.3

4. EXPENDITURES

	1911	1912	1913	1914	1915
Printing	\$2495.18	3220.83	3328.01	3023.62	2834.91
Salary of editor	1500.00	1500.00	1500.00	1500.00	1500.00
Contributors	1320.25	1114.50	1268.35	1312.25	1210.00
Clerical assistance	865.50	794.89	983.09	1236.29	1171.87
Supplies	413.51	292.68	325.10	459.18	286.86
Traveling expenses of Editors...	136.15				
	\$6750.59	6922.90	7404.55	7531.34	7003.64

DAVIS R. DEWEY,
Managing Editor.

REPORT OF THE COMMITTEE ON ACADEMIC FREEDOM AND ACADEMIC TENURE¹

I. GENERAL DECLARATION OF PRINCIPLES

The term "academic freedom" has traditionally had two applications—to the freedom of the teacher and to that of the student, *Lehrfreiheit* and *Lernfreiheit*. It need scarcely be pointed out that the freedom which is the subject of this report is that of the teacher. Academic freedom in this sense comprises three elements: freedom of inquiry and research; freedom of teaching within the university or college; and freedom of extra-mural utterance and action. The first of these is almost everywhere so safeguarded that the dangers of its infringement are slight. It may therefore be disregarded in this report. The second and third phases of academic freedom are closely related, and are often not distinguished. The third, however, has an importance of its own, since of late it has perhaps more frequently been the occasion of difficulties and controversies than has the question of freedom of intra-academic teaching. All five of the cases which have recently been investigated by committees of this Association have involved, at least as one factor, the right of university teachers to express their opinions freely outside the university or to engage in political activities in their capacity as citizens. The general principles which have to do with freedom of teaching in both these senses seem to the committee to be in great part, though not wholly, the same. In this report, therefore, we shall consider the matter primarily with reference to freedom of teaching within the university, and shall assume that what is said thereon is also applicable to the freedom of speech of university teachers outside their institutions, subject to certain qualifications and supplementary considerations which will be pointed out in the course of the report.

An adequate discussion of academic freedom must necessarily consider three matters: (1) the scope and basis of the power exercised by those bodies having ultimate legal authority in academic affairs; (2) the nature of the academic calling; (3) the function of the academic institution or university.

¹ A report made to the American Association of University Professors by a committee of nine members, with which a committee of three representing the American Economic Association had been merged. The report was accepted and approved by the American Association of University Professors at a meeting held in Washington, January, 1, 1916.

1. Basis of academic authority

American institutions of learning are usually controlled by boards of trustees as the ultimate repositories of power. Upon them finally it devolves to determine the measure of academic freedom which is to be realized in the several institutions. It therefore becomes necessary to inquire into the nature of the trust reposed in these boards, and to ascertain to whom the trustees are to be considered accountable.

The simplest case is that of a proprietary school or college designed for the propagation of specific doctrines prescribed by those who have furnished its endowment. It is evident that in such cases the trustees are bound by the deed of gift, and, whatever be their own views, are obligated to carry out the terms of the trust. If a church or religious denomination establishes a college to be governed by a board of trustees, with the express understanding that the college will be used as an instrument of propaganda in the interests of the religious faith professed by the church or denomination creating it, the trustees have a right to demand that everything be subordinated to that end. If, again, as has happened in this country, a wealthy manufacturer establishes a special school in a university in order to teach, among other things, the advantages of a protective tariff, or if, as is also the case, an institution has been endowed for the purpose of propagating the doctrines of socialism, the situation is analogous. All of these are essentially proprietary institutions, in the moral sense. They do not, at least as regards one particular subject, accept the principles of freedom of inquiry, of opinion, and of teaching; and their purpose is not to advance knowledge by the unrestricted research and unfettered discussion of impartial investigators, but rather to subsidize the promotion of the opinions held by the persons, usually not of the scholar's calling, who provide the funds for their maintenance. Concerning the desirability of the existence of such institutions, the committee does not desire to express any opinion. But it is manifestly important that they should not be permitted to sail under false colors. Genuine boldness and thoroughness of inquiry, and freedom of speech, are scarcely reconcilable with the prescribed inculcation of a particular opinion upon a controverted question.

Such institutions are rare, however, and are becoming ever more rare. We still have, indeed, colleges under denominational auspices; but very few of them impose upon their trustees responsibility for the spread of specific doctrines. They are more and more coming to occupy, with respect to the freedom enjoyed by the members of their teaching bodies, the position of untrammelled institutions of learning, and are differen-

tiated only by the natural influence of their respective historic antecedents and traditions.

Leaving aside, then, the small number of institutions of the proprietary type, what is the nature of the trust reposed in the governing boards of the ordinary institutions of learning? Can colleges and universities that are not strictly bound by their founders to a propagandist duty ever be included in the class of institutions that we have just described as being in a moral sense proprietary? The answer is clear. If the former class of institutions constitute a private or proprietary trust, the latter constitute a public trust. The trustees are trustees for the public. In the case of our state universities this is self-evident. In the case of most of our privately endowed institutions, the situation is really not different. They cannot be permitted to assume the proprietary attitude and privilege, if they are appealing to the general public for support. Trustees of such universities or colleges have no moral right to bind the reason or the conscience of any professor. All claim to such right is waived by the appeal to the general public for contributions and for moral support in the maintenance, not of a propaganda, but of a non-partisan institution of learning. It follows that any university which lays restrictions upon the intellectual freedom of its professors proclaims itself a proprietary institution, and should be so described whenever it makes a general appeal for funds; and the public should be advised that the institution has no claim whatever to general support or regard.

This elementary distinction between a private and a public trust is not yet so universally accepted as it should be in our American institutions. While in many universities and colleges the situation has come to be entirely satisfactory, there are others in which the relation of trustees to professors is apparently still conceived to be analogous to that of a private employer to his employees; in which, therefore, trustees are not regarded as debarred by any moral restrictions, beyond their own sense of expediency, from imposing their personal opinions upon the teaching of the institution, or even from employing the power of dismissal to gratify their private antipathies or resentments. An eminent university president thus described the situation not many years since:

In the institutions of higher education the board of trustees is the body on whose discretion, good feeling, and experience the securing of academic freedom now depends. There are boards which leave nothing to be desired in these respects; but there are also numerous bodies that have everything to learn with regard to academic freedom. These barbarous boards exercise an arbitrary power of dismissal. They exclude from the teachings of the univer-

sity unpopular or dangerous subjects. In some states they even treat professors' positions as common political spoils; and all too frequently, both in state and endowed institutions, they fail to treat the members of the teaching staff with that high consideration to which their functions entitle them.²

It is, then, a prerequisite to a realization of the proper measure of academic freedom in American institutions of learning, that all boards of trustees should understand—as many already do—the full implications of the distinction between private proprietorship and a public trust.

2. The nature of the academic calling

The above-mentioned conception of a university as an ordinary business venture, and of academic teaching as a purely private employment, manifests also a radical failure to apprehend the nature of the social function discharged by the professional scholar. While we should be reluctant to believe that any large number of educated persons suffer from such a misapprehension, it seems desirable at this time to restate clearly the chief reasons, lying in the nature of the university teaching profession, why it is to the public interest that the professorial office should be one both of dignity and of independence.

If education is the corner stone of the structure of society and if progress in scientific knowledge is essential to civilization, few things can be more important than to enhance the dignity of the scholar's profession, with a view to attracting into its ranks men of the highest ability, of sound learning, and of strong and independent character. This is the more essential because the pecuniary emoluments of the profession are not, and doubtless never will be, equal to those open to the more successful members of other professions. It is not, in our opinion, desirable that men should be drawn into this profession by the magnitude of the economic rewards which it offers; but it is for this reason the more needful that men of high gifts and character should be drawn into it by the assurance of an honorable and secure position, and of freedom to perform honestly and according to their own consciences the distinctive and important function which the nature of the profession lays upon them.

That function is to deal at first hand, after prolonged and specialized technical training, with the sources of knowledge; and to impart the results of their own and of their fellow-specialists' investigations and reflection, both to students and to the general public, without fear or

²From "Academic Freedom," an address delivered before the New York Chapter of the Phi Beta Kappa Society at Cornell University, May 29, 1907, by Charles William Eliot, LL.D., President of Harvard University.

favor. The proper discharge of this function requires (among other things) that the university teacher shall be exempt from any pecuniary motive or inducement to hold, or to express, any conclusion which is not the genuine and uncolored product of his own study or that of fellow-specialists. Indeed, the proper fulfilment of the work of the professorate requires that our universities shall be so free that no fair-minded person shall find any excuse for even a suspicion that the utterances of university teachers are shaped or restricted by the judgment, not of professional scholars, but of inexpert and possibly not wholly disinterested persons outside of their ranks. The lay public is under no compulsion to accept or to act upon the opinions of the scientific experts whom, through the universities, it employs. But it is highly needful, in the interest of society at large, that what purport to be the conclusions of men trained for, and dedicated to, the quest for truth, shall in fact be the conclusions of such men, and not echoes of the opinions of the lay public, or of the individuals who endow or manage universities. To the degree that professional scholars, in the formation and promulgation of their opinions, are, or by the character of their tenure appear to be, subject to any motive other than their own scientific conscience and a desire for the respect of their fellow-experts, to that degree the university teaching profession is corrupted; its proper influence upon public opinion is diminished and vitiated; and society at large fails to get from its scholars, in an unadulterated form, the peculiar and necessary service which it is the office of the professional scholar to furnish.

These considerations make still more clear the nature of the relationship between university trustees and members of university faculties. The latter are the appointees, but not in any proper sense the employees, of the former. For, once appointed, the scholar has professional functions to perform in which the appointing authorities have neither competency nor moral right to intervene. The responsibility of the university teacher is primarily to the public itself, and to the judgment of his own profession; and while, with respect to certain external conditions of his vocation, he accepts a responsibility to the authorities of the institution in which he serves, in the essentials of his professional activity his duty is to the wider public to which the institution itself is morally amenable. So far as the university teacher's independence of thought and utterance is concerned—though not in other regards—the relationship of professor to trustees may be compared to that between judges of the federal courts and the executive who appoints them. University teachers should be understood to be,

with respect to the conclusions reached and expressed by them, no more subject to the control of the trustees than are judges subject to the control of the president, with respect to their decisions; while of course, for the same reason, trustees are no more to be held responsible for, or to be presumed to agree with, the opinions or utterances of professors than the president can be assumed to approve of all the legal reasonings of the courts. A university is a great and indispensable organ of the higher life of a civilized community, in the work of which the trustees hold an essential and highly honorable place, but in which the faculties hold an independent place, with quite equal responsibilities—and in relation to purely scientific and educational questions, the primary responsibility. Misconception or obscurity in this matter has undoubtedly been a source of occasional difficulty in the past, and even in several instances during the current year, however much, in the main, a long tradition of kindly and courteous intercourse between trustees and members of university faculties has kept the question in the background.

3. The function of the academic institution

The importance of academic freedom is most clearly perceived in the light of the purposes for which universities exist. These are three in number:

- A. To promote inquiry and advance the sum of human knowledge.
- B. To provide general instruction to the students.
- C. To develop experts for various branches of the public service.

Let us consider each of these. In the earlier stages of a nation's intellectual development, the chief concern of educational institutions is to train the growing generation and to diffuse the already accepted knowledge. It is only slowly that there comes to be provided in the highest institutions of learning the opportunity for the gradual wresting from nature of her intimate secrets. The modern university is becoming more and more the home of scientific research. There are three fields of human inquiry in which the race is only at the beginning: natural science, social science, and philosophy and religion, dealing with the relations of man to outer nature, to his fellow men, and to the ultimate realities and values. In natural science all that we have learned but serves to make us realize more deeply how much more remains to be discovered. In social science in its largest sense, which is concerned with the relations of men in society and with the conditions of social order and well-being, we have learned only an adumbration of the laws which govern these vastly complex phenomena. Fi-

nally, in the spiritual life, and in the interpretation of the general meaning and ends of human existence and its relation to the universe, we are still far from a comprehension of the final truths, and from a universal agreement among all sincere and earnest men. In all of these domains of knowledge, the first condition of progress is complete and unlimited freedom to pursue inquiry and publish its results. Such freedom is the breath in the nostrils of all scientific activity.

The second function—which for a long time was the only function—of the American college or university is to provide instruction for students. It is scarcely open to question that freedom of utterance is as important to the teacher as it is to the investigator. No man can be a successful teacher unless he enjoys the respect of his students, and their confidence in his intellectual integrity. It is clear, however, that this confidence will be impaired if there is suspicion on the part of the student that the teacher is not expressing himself fully or frankly, or that college and university teachers in general are a repressed and intimidated class who dare not speak with that candor and courage which youth always demands in those whom it is to esteem. The average student is a discerning observer, who soon takes the measure of his instructor. It is not only the character of the instruction but also the character of the instructor that counts; and if the student has reason to believe that the instructor is not true to himself, the virtue of the instruction as an educative force is incalculably diminished. There must be in the mind of the teacher no mental reservation. He must give the student the best of what he has and what he is.

The third function of the modern university is to develop experts for the use of the community. If there is one thing that distinguishes the more recent developments of democracy, it is the recognition by legislators of the inherent complexities of economic, social, and political life, and the difficulty of solving problems of technical adjustment without technical knowledge. The recognition of this fact has led to a continually greater demand for the aid of experts in these subjects, to advise both legislators and administrators. The training of such experts has, accordingly, in recent years, become an important part of the work of the universities; and in almost every one of our higher institutions of learning the professors of the economic, social, and political sciences have been drafted to an increasing extent into more or less unofficial participation in the public service. It is obvious that here again the scholar must be absolutely free not only to pursue his investigations but to declare the results of his researches, no matter where they may lead him or to what extent they may come into conflict with accepted

opinion. To be of use to the legislator or the administrator, he must enjoy their complete confidence in the disinterestedness of his conclusions.

It is clear, then, that the university cannot perform its threefold function without accepting and enforcing to the fullest extent the principle of academic freedom. The responsibility of the university as a whole is to the community at large, and any restriction upon the freedom of the instructor is bound to react injuriously upon the efficiency and the *morale* of the institution, and therefore ultimately upon the interests of the community.

The attempted infringements of academic freedom at present are probably not only of less frequency than, but of a different character from, those to be found in former times. In the early period of university development in America the chief menace to academic freedom was ecclesiastical, and the disciplines chiefly affected were philosophy and the natural sciences. In more recent times the danger zone has been shifted to the political and social sciences—though we still have sporadic examples of the former class of cases in some of our smaller institutions. But it is precisely in these provinces of knowledge in which academic freedom is now most likely to be threatened, that the need for it is at the same time most evident. No person of intelligence believes that all of our political problems have been solved, or that the final stage of social evolution has been reached. Grave issues in the adjustment of men's social and economic relations are certain to call for settlement in the years that are to come; and for the right settlement of them mankind will need all the wisdom, all the good will, all the soberness of mind, and all the knowledge drawn from experience, that it can command. Towards this settlement the university has potentially its own very great contribution to make; for if the adjustment reached is to be a wise one, it must take due account of economic science, and be guided by that breadth of historic vision which it should be one of the functions of a university to cultivate. But if the universities are to render any such service towards the right solution of the social problems of the future, it is the first essential that the scholars who carry on the work of universities shall not be in a position of dependence upon the favor of any social class or group, that the disinterestedness and impartiality of their inquiries and their conclusions shall be, so far as is humanly possible, beyond the reach of suspicion.

The special dangers to freedom of teaching in the domain of the social sciences are evidently two. The one which is the more likely to

affect the privately endowed colleges and universities is the danger of restrictions upon the expression of opinions which point towards extensive social innovations, or call in question the moral legitimacy or social expediency of economic conditions or commercial practices in which large vested interests are involved. In the political, social, and economic field almost every question, no matter how large and general it at first appears, is more or less affected with private or class interests; and, as the governing body of a university is naturally made up of men who through their standing and ability are personally interested in great private enterprises, the points of possible conflict are numberless. When to this is added the consideration that benefactors, as well as most of the parents who send their children to privately endowed institutions, themselves belong to the more prosperous and therefore usually to the more conservative classes, it is apparent that, so long as effectual safeguards for academic freedom are not established, there is a real danger that pressure from vested interests may, sometimes deliberately and sometimes unconsciously, sometimes openly and sometimes subtly and in obscure ways, be brought to bear upon academic authorities.

On the other hand, in our state universities the danger may be the reverse. Where the university is dependent for funds upon legislative favor, it has sometimes happened that the conduct of the institution has been affected by political considerations; and where there is a definite governmental policy or a strong public feeling on economic, social, or political questions, the menace to academic freedom may consist in the repression of opinions that in the particular political situation are deemed ultra-conservative rather than ultra-radical. The essential point, however, is not so much that the opinion is of one or another shade, as that it differs from the views entertained by the authorities. The question resolves itself into one of departure from accepted standards; whether the departure is in the one direction or the other is immaterial.

This brings us to the most serious difficulty of this problem; namely, the dangers connected with the existence in a democracy of an overwhelming and concentrated public opinion. The tendency of modern democracy is for men to think alike, to feel alike, and to speak alike. Any departure from the conventional standards is apt to be regarded with suspicion. Public opinion is at once the chief safeguard of a democracy, and the chief menace to the real liberty of the individual. It almost seems as if the danger of despotism cannot be wholly averted under any form of government. In a political autocracy there is no effective public opinion, and all are subject to the tyranny of the

ruler; in a democracy there is political freedom, but there is likely to be a tyranny of public opinion.

An inviolable refuge from such tyranny should be found in the university. It should be an intellectual experiment station, where new ideas may germinate and where their fruit, though still distasteful to the community as a whole, may be allowed to ripen until finally, perchance, it may become a part of the accepted intellectual food of the nation or of the world. Not less is it a distinctive duty of the university to be the conservator of all genuine elements of value in the past thought and life of mankind which are not in the fashion of the moment. Though it need not be the "home of beaten causes," the university is, indeed, likely always to exercise a certain form of conservative influence. For by its nature it is committed to the principle that knowledge should precede action, to the caution (by no means synonymous with intellectual timidity) which is an essential part of the scientific method, to a sense of the complexity of social problems, to the practice of taking long views into the future, and to a reasonable regard for the teachings of experience. One of its most characteristic functions in a democratic society is to help make public opinion more self-critical and more circumspect, to check the more hasty and unconsidered impulses of popular feeling, to train the democracy to the habit of looking before and after. It is precisely this function of the university which is most injured by any restriction upon academic freedom; and it is precisely those who most value this aspect of the university's work who should most earnestly protest against any such restriction. For the public may respect, and be influenced by, the counsels of prudence and of moderation which are given by men of science, if it believes those counsels to be the disinterested expression of the scientific temper and of unbiased inquiry. It is little likely to respect or heed them if it has reason to believe that they are the expression of the interests, or the timidities, of the limited portion of the community which is in a position to endow institutions of learning, or is most likely to be represented upon their boards of trustees. And a plausible reason for this belief is given the public so long as our universities are not organized in such a way as to make impossible any exercise of pressure upon professorial opinions and utterances by governing boards of laymen.

Since there are no rights without corresponding duties, the considerations heretofore set down with respect to the freedom of the academic teacher entail certain correlative obligations. The claim to freedom of teaching is made in the interest of the integrity and of the progress of scientific inquiry; it is, therefore, only those who carry on

their work in the temper of the scientific inquirer who may justly assert this claim. The liberty of the scholar within the university to set forth his conclusions, be they what they may, is conditioned by their being conclusions gained by a scholar's method and held in a scholar's spirit; that is to say, they must be the fruits of competent and patient and sincere inquiry, and they should be set forth with dignity, courtesy, and temperateness of language. The university teacher, in giving instruction upon controversial matters, while he is under no obligation to hide his own opinion under a mountain of equivocal verbiage, should, if he is fit for his position, be a person of a fair and judicial mind; he should, in dealing with such subjects, set forth justly, without suppression or innuendo, the divergent opinions of other investigators; he should cause his students to become familiar with the best published expressions of the great historic types of doctrine upon the questions at issue; and he should, above all, remember that his business is not to provide his students with ready-made conclusions, but to train them to think for themselves, and to provide them access to those materials which they need if they are to think intelligently.

It is, however, for reasons which have already been made evident, inadmissible that the power of determining when departures from the requirements of the scientific spirit and method have occurred, should be vested in bodies not composed of members of the academic profession. Such bodies necessarily lack full competency to judge of those requirements; their intervention can never be exempt from the suspicion that it is dictated by other motives than zeal for the integrity of science; and it is, in any case, unsuitable to the dignity of a great profession that the initial responsibility for the maintenance of its professional standards should not be in the hands of its own members. It follows that university teachers must be prepared to assume this responsibility for themselves. They have hitherto seldom had the opportunity, or perhaps the disposition, to do so. The obligation will doubtless, therefore, seem to many an unwelcome and burdensome one; and for its proper discharge members of the profession will perhaps need to acquire, in a greater measure than they at present possess it, the capacity for impersonal judgment in such cases, and for judicial severity when the occasion requires it. But the responsibility cannot, in this committee's opinion, be rightfully evaded. If this profession should prove itself unwilling to purge its ranks of the incompetent and the unworthy, or to prevent the freedom which it claims in the name of science from being used as a shelter for inefficiency, for superficiality, or for uncritical and intemperate partisanship, it is certain that the

task will be performed by others—by others who lack certain essential qualifications for performing it, and whose action is sure to breed suspicions and recurrent controversies deeply injurious to the internal order and the public standing of universities. Your committee has, therefore, in the appended "Practical Proposals" attempted to suggest means by which judicial action by representatives of the profession, with respect to the matters here referred to, may be secured.

There is one case in which the academic teacher is under an obligation to observe certain special restraints—namely, the instruction of immature students. In many of our American colleges, and especially in the first two years of the course, the student's character is not yet fully formed, his mind is still relatively immature. In these circumstances it may reasonably be expected that the instructor will present scientific truth with discretion, that he will introduce the student to new conceptions gradually, with some consideration for the student's preconceptions and traditions, and with due regard to character-building. The teacher ought also to be especially on his guard against taking unfair advantage of the student's immaturity by indoctrinating him with the teacher's own opinions before the student has had an opportunity fairly to examine other opinions upon the matters in question, and before he has sufficient knowledge and ripeness of judgment to be entitled to form any definite opinion of his own. It is not the least service which a college or university may render to those under its instruction, to habituate them to looking not only patiently but methodically on both sides, before adopting any conclusion upon controverted issues. By these suggestions, however, it need scarcely be said that the committee does not intend to imply that it is not the duty of an academic instructor to give to any students old enough to be in college a genuine intellectual awakening and to arouse in them a keen desire to reach personally verified conclusions upon all questions of general concernment to mankind, or of special significance for their own time. There is much truth in some remarks recently made in this connection by a college president:

Certain professors have been refused reflection lately, apparently because they set their students to thinking in ways objectionable to the trustees. It would be well if more teachers were dismissed because they fail to stimulate thinking of any kind. We can afford to forgive a college professor what we regard as the occasional error of his doctrine, especially as we may be wrong, provided he is a contagious center of intellectual enthusiasm. It is better for students to think about heresies than not to think at all; better for them to climb new trails, and stumble over error if need be, than to ride forever in upholstered ease in the overcrowded highway. It is a primary duty of a teacher

to make a student take an honest account of his stock of ideas, throw out the dead matter, place revised price marks on what is left, and try to fill his empty shelves with new goods.³

It is, however, possible and necessary that such intellectual awakening be brought about with patience, considerateness, and pedagogical wisdom.

There is one further consideration with regard to the classroom utterances of college and university teachers to which the committee thinks it important to call the attention of members of the profession, and of administrative authorities. Such utterances ought always to be considered privileged communications. Discussions in the classroom ought not to be supposed to be utterances for the public at large. They are often designed to provoke opposition or arouse debate. It has, unfortunately, sometimes happened in this country that sensational newspapers have quoted and garbled such remarks. As a matter of common law, it is clear that the utterances of an academic instructor are privileged, and may not be published, in whole or part, without his authorization. But our practice, unfortunately, still differs from that of foreign countries, and no effective check has in this country been put upon such unauthorized and often misleading publication. It is much to be desired that test cases should be made of any infractions of the rule.⁴

In their extra-mural utterances, it is obvious that academic teachers are under a peculiar obligation to avoid hasty or unverified or exaggerated statements, and to refrain from intemperate or sensational modes of expression. But, subject to these restraints, it is not, in this committee's opinion, desirable that scholars should be debarred from giving expression to their judgments upon controversial questions, or that their freedom of speech, outside the university, should be limited to questions falling within their own specialties. It is clearly not proper that they should be prohibited from lending their active support to organized movements which they believe to be in the public interest. And, speaking broadly, it may be said in the words of a non-academic body already once quoted in a publication of this

³ President William T. Foster in *The Nation*, November 11, 1915.

⁴ The leading case is *Abernethy vs. Hutchinson*, 3 L. J., Ch. 209. In this case where damages were awarded the court held as follows: "That persons who are admitted as pupils or otherwise to hear these lectures, although they are orally delivered and the parties might go to the extent, if they were able to do so, of putting down the whole by means of shorthand, yet they can do that only for the purpose of their own information and could not publish, for profit, that which they had not obtained the right of selling."

Association, that "it is neither possible nor desirable to deprive a college professor of the political rights vouchsafed to every citizen."⁵

It is, however, a question deserving of consideration by members of this Association, and by university officials, how far academic teachers, at least those dealing with political, economic, and social subjects, should be prominent in the management of our great party organizations, or should be candidates for state or national offices of a distinctly political character. It is manifestly desirable that such teachers have minds untrammelled by party loyalties, unexcited by party enthusiasms, and unbiased by personal political ambitions; and that universities should remain uninvolved in party antagonisms. On the other hand, it is equally manifest that the material available for the service of the State would be restricted in a highly undesirable way, if it were understood that no member of the academic profession should ever be called upon to assume the responsibilities of public office. This question may, in the committee's opinion, suitably be made a topic for special discussion at some future meeting of this Association, in order that a practical policy, which shall do justice to the two partially conflicting considerations that bear upon the matter, may be agreed upon.

It is, it will be seen, in no sense the contention of this committee that academic freedom implies that individual teachers should be exempt from all restraints as to the matter or manner of their utterances, either within or without the university. Such restraints as are necessary should in the main, your committee holds, be self-imposed, or enforced by the public opinion of the profession. But there may, undoubtedly, arise occasional cases in which the aberrations of individuals may require to be checked by definite disciplinary action. What this report chiefly maintains is that such action can not with safety be taken by bodies not composed of members of the academic profession. Lay governing boards are competent to judge concerning charges of habitual neglect of assigned duties, on the part of individual teachers, and concerning charges of grave moral delinquency. But in matters of opinion, and of the utterance of opinion, such boards can not intervene without destroying, to the extent of their intervention, the essential nature of a university—without converting it from a place dedicated to openness of mind, in which the conclusions expressed are the tested conclusions of trained scholars, into a place barred against the access of new light, and precommitted to the opinions or preju-

⁵ *Report of the Wisconsin State Board of Public Affairs*, December, 1914.

dices of men who have not been set apart or expressly trained for the scholar's duties. It is, in short, not the absolute freedom of utterance of the individual scholar, but the absolute freedom of thought, of inquiry, of discussion and of teaching, of the academic profession, that is asserted by this declaration of principles. It is conceivable that our profession may prove unworthy of its high calling, and unfit to exercise the responsibilities that belong to it. But it will scarcely be said as yet to have given evidence of such unfitness. And the existence of this Association, as it seems to your committee, must be construed as a pledge, not only that the profession will earnestly guard those liberties without which it can not rightly render its distinctive and indispensable service to society, but also that it will with equal earnestness seek to maintain such standards of professional character, and of scientific integrity and competency, as shall make it a fit instrument for that service.

II. PRACTICAL PROPOSALS

As the foregoing declaration implies, the ends to be accomplished are chiefly three:

First: To safeguard freedom of inquiry and of teaching against both covert and overt attacks, by providing suitable judicial bodies, composed of members of the academic profession, which may be called into action before university teachers are dismissed or disciplined, and may determine in what cases the question of academic freedom is actually involved.

Second: By the same means, to protect college executives and governing boards against unjust charges of infringement of academic freedom, or of arbitrary and dictatorial conduct—charges which, when they gain wide currency and belief, are highly detrimental to the good repute and the influence of universities.

Third: To render the profession more attractive to men of high ability and strong personality by insuring the dignity, the independence, and the reasonable security of tenure, of the professorial office.

The measures which it is believed to be necessary for our universities to adopt to realize these ends—measures which have already been adopted in part by some institutions—are four:

A. Action by Faculty Committees on Reappointments. Official action relating to reappointments and refusals of reappointment should be taken only with the advice and consent of some board or committee representative of the faculty. Your committee does not desire to

make at this time any suggestion as to the manner of selection of such boards.

B. Definition of Tenure of Office. In every institution there should be an unequivocal understanding as to the term of each appointment; and the tenure of professorships and associate professorships, and of all positions above the grade of instructor after ten years of service, should be permanent (subject to the provisions hereinafter given for removal upon charges). In those state universities which are legally incapable of making contracts for more than a limited period, the governing boards should announce their policy with respect to the presumption of reappointment in the several classes of position, and such announcements, though not legally enforceable, should be regarded as morally binding. No university teacher of any rank should, except in cases of grave moral delinquency, receive notice of dismissal or of refusal of reappointment, later than three months before the close of any academic year, and in the case of teachers above the grade of instructor, one year's notice should be given.

C. Formulation of Grounds for Dismissal. In every institution the grounds which will be regarded as justifying the dismissal of members of the faculty should be formulated with reasonable definiteness; and in the case of institutions which impose upon their faculties doctrinal standards of a sectarian or partisan character, these standards should be clearly defined and the body or individual having authority to interpret them, in case of controversy, should be designated. Your committee does not think it best at this time to attempt to enumerate the legitimate grounds for dismissal, believing it to be preferable that individual institutions should take the initiative in this.

D. Judicial Hearings Before Dismissal. Every university or college teacher should be entitled, before dismissal^{*} or demotion, to have the charges against him stated in writing in specific terms and to have a fair trial on those charges before a special or permanent judicial committee chosen by the faculty senate or council, or by the faculty at large. At such trial the teacher accused should have full opportunity to present evidence, and, if the charge is one of professional incompetency, a formal report upon his work should be first made in writing by the teachers of his own department and of cognate departments in the university, and, if the teacher concerned so desire, by a committee of

^{*}This does not refer to refusals of reappointment at the expiration of the terms of office of teachers below the rank of associate professor. All such questions of reappointment should, as above provided, be acted upon by a faculty committee.

his fellow-specialists from other institutions, appointed by some competent authority.

The above declaration of principles and practical proposals are respectfully submitted by your committee to the approval of the Association, with the suggestion that, if approved, they be recommended to the consideration of the faculties, administrative officers, and governing boards of the American universities and colleges.

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